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ABSTRACT

Reports and materials from the Hawaiian Studies Project are presented. The document, designed for elementary school teachers contains two major sections. The first section describes the planning phase of the project, the Summer Institute for Hawaiian Culture Studies (1976) and the follow-up workshops and consultant help (1976-77). The appendix to this part lists addresses for obtaining Hawaiian artifact reproduction kits, readings for the summer institute, slides of Hawaiian artifacts, and overhead transparency masters. The second and largest section contains 40 brief readings developed by participants in the summer institute. The topic of each reading is an aspect of Hawaiian culture; each includes illustrations and a reading list. Topics include animals used by Hawaiians, the canoe, fishing, barter, feather-gathering, petroglyphs, gourd water containers, platters, shell trumpets, cultivation, and training for war and weapons used. Indices provide an alphabetized list of teacher information materials and data cards, and a subject matter guide to four Hawaiian culture information books for students. (KC)

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Culture Studies: Hawaiian Studies Project

November 1978

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M A H A L O

from Dorothy Hazama

The Culture Studies: Hawaiian Studies Project and its many outcomes were made possible because of the dedication and involvement of many educators. My deepest MAHALO to those who worked with me on various phases of this exciting project . . .

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. . . and especially the Editorial Committee of Participant-Developers who sacrificed a number of Saturdays, holidays, and summer vacation days over a period of 15 months to work with me in revising and editing the Data Cards and Teacher Information Materials:

Ku'ulei Ihara, Editorial Consultant
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*haku: master, director, leader

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OTHER COMPONENTS DISTRIBUTED UNDER SEPARATE COVER

A Framework for Culture Study with Special Focus on the Study of Hawai'i

Data Cards and Data Box

Slide Set: Hawaiian Artifact Reproductions

Overhead Transparency Masters

Hawaiian Culture Artifact Reproduction Kits (2 kits per O'ahu Districts)

CULTURE STUDIES: HAWAIIAN STUDIES PROJECT

by Associate Professor Dorothy Hazama,
Project Consultant and Editor

INTRODUCTION

In the Hawaiian tradition, the 'Ohana of the Culture Studies: Hawaiian Studies Project wishes to share the products of its work with you. The Data Cards, Teacher Information Materials, slide set and overhead transparency masters are the more visible components of the Project, but they were actually unexpected bonuses. The major focus of the Project was the in-service education of teachers of culture study with an in-depth study of the Hawaiian culture as its content base. Therefore, to understand the purpose behind the materials and to make effective use of these components, it is recommended that teachers study:

1). The theoretical and methodological bases contained in A Framework for Culture Study with Special Focus on the Study of Hawai'i;

2). The processes experienced by the participants in the Summer Institute for Hawaiian Culture Studies as described in this report.

PLANNING PHASE

Through the efforts of Elaine Takenaka, State Social Studies Program Specialist, expansion funds were made available for a Culture Studies: Hawaiian Studies Project. Project consultants from the State Department of Education, College of Education-University of Hawai'i, and the Bishop Museum Education Department met throughout the 1976 spring semester to discuss objectives and implementation plans. Although the seven consultants were from several institutions and had varied backgrounds, the stimulating discussions revealed a commonality in outlook towards the goals of culture study for teachers and pupils.

After the initial series of meetings on the objectives of the Project, Dr. Fannie Shaftel summarized the key ideas in four brief drafts which described:

1). The rationale for culture study;

2). The specific objectives of the Project;

3). Some methods of teaching culture studies;

4). The dynamics of the unit using the dramatic inquiry approach.

The three Museum Education Department consultants have since developed these drafts into A Framework for Culture Study with Special Focus on the Study

of Hawai'i.

To carry out the goals of in-service education with this framework as a guide, a Summer Institute for Culture Studies: Hawaiian Studies was planned for thirty to thirty-five teachers to be selected from the four O'ahu school districts. The selected participants would attend a four-week tuition-funded, University course carrying six credits. The State Social Studies Program Specialist designated Dorothy Hazama as the Instructor of the Summer Institute and Chief Consultant of the Project. She had been for many years, the methods course instructor for the Study of Hawai'i at the College of Education, University of Hawai'i, Mānoa Campus. The Instructor was to be assisted by a fourth grade Hawaiian culture studies teacher who would be designated as Coordinator.

Upper elementary teachers, especially from the fourth grade, and teams of teachers from a school were to be given preference. Consultants felt that a team from a school might further support and reinforce the culture study objectives at the school level. The District Curriculum Specialists were most cooperative and were responsible for the selection of their quota of district participants.

A follow-up program for the 1976-77 school year was another important in-service phase that was built into the Project. The teachers selected for the Institute understood that monthly workshops would be scheduled for the entire group during the following school year and that consultant help would also be made available to individuals and school teams in the field.

Funds were allocated for a classroom library of references with books on the rationale for culture study, diverse cultures, methodology, and ancient Hawaiian culture. Funds were also budgeted for honoraria for resource speakers and field trip expenses. Objects for eight Hawaiian Artifact Reproduction Kits, two for each O'ahu school district, were also ordered from seven sources. (See Appendix for list of reference titles, artifact reproductions and sources.)

SUMMER INSTITUTE FOR HAWAIIAN CULTURE STUDIES, 1976

The key phase of in-service education in culture studies became a reality after months of planning and anticipation as thirty-eight educators met at Kapālama School in the summer of 1976. The group consisted of thirty-four classroom teachers and one librarian, the Instructor, the Coordinator-Participant, and a Consultant-Participant who was the DOE Liaison Teacher to Bishop Museum. These thirty-eight people were to experience four intensive weeks of learning and working together. These four weeks eventually led the group to become a congenial 'ohana which would continue its commitment for several years producing materials and conducting workshops that would benefit many teachers and pupils throughout the State.

The Institute began the first day with an opening aloha chant and a few get-acquainted activities such as a Culture Friendship Bingo and "Pa'i Pa'i Lima," a partner hula. A pre-test then initiated and immersed participants

in the processes of examining their own cultural biases and ethnocentricities. This awareness was further deepened, explored, and shared as the days went by through small and large group discussions, viewing films, reading assignments in selected books and other activities. The following books helped participants to experience dramatically and vicariously the life in very different cultures:

Return to Laughter

My Samoan Chief

Top of the World

Growing Up in a Philipine Barrio

This developing consciousness of the influence of our culture in the formation of our values, biases, and view of others was continued throughout the four weeks. Participants began to share openly their personal experiences and thus became valuable cultural resources to other members. The participants began to want to better understand the cultural background of their students, especially the more recent immigrants; and guest speakers such as a Samoan chief and Vietnamese and Korean aides in the schools provided meaningful information. They explained the differences in child-rearing practices, behavior expected of children, and difficulties encountered in the strange new school settings.

Because of the intensive nature of the course, the participants became keenly aware of their own ethnocentric nature; the effect of culture in shaping their values, behavior, and view of others, as well as the bi-cultural or multi-cultural influences in their lives and those of their students. The Instructor felt the time had come to involve the participants in experiencing teaching strategies for culture studies.

Dr. Shaftel, dynamic author of Role-Playing for Social Values, and the Instructor teamed to initiate the methodology of culture study in the classroom with the focus on our own Hawaiian cultural heritage. Adzes, octopus lures, shark tooth weapons, nets, and other familiar as well as unfamiliar Hawaiian artifacts and reproductions were on display. Participants were invited to handle, to examine and to make conjectures about the objects in the arranged environment. They were encouraged to act out ways in which the Hawaiians might have used the objects. Questions were recorded on chart paper and the instructors observed carefully in order to diagnose the knowledge level and needs of the learners.

A dramatic inquiry experience was next in the sequence of the dynamics of culture study. A mountain area, a midlands area, and a seashore area were designated in the classroom cleared of furniture. A recording of ancient Hawaiian music was played to create a mood as the Instructor guided the participants to imagine themselves back in ancient Hawai'i.

Thirty-eight "ancient Hawaiians," individually or in small groups, lived in the Hawai'i of long ago - catching fish, cutting trees, beating kapa, pounding poi, and doing other activities.

When the entire group came together after the brief dramatization,

participants kept two recorders busy as they raised questions about the objects as well as about the many aspects of the everyday lives of the ancient Hawaiians. Two walls were covered with chart papers full of questions.

These questions became the basis for research assignments. Highly motivated, the participants began to search for information in reference books and numerous handouts. Guest lecturers provided more background information. Dr. Donald Mitchell presented a lecture at the Bishop Museum utilizing the mural of an ahupua'a (land division) from the Kamehameha Schools. He also lectured on-site at Kāneaki Heiau, the Royal Mausoleum, and on a round-the-island field trip. Beatrice Krauss gave a lecture on the ancient uses of plants at the Lyon Arboretum. Ku'ulei Ihara, Consultant-Participant, was valuable in providing other information and resources. Video-taped lectures and films were also used.

Being in a school located across the street from the Bishop Museum proved to be an ideal location since the participants were able to go there to examine the displays as often as they wished. The results of their research are now made available in the Hawaiian Culture Teacher Information Materials section.

The next assignment for the participants was to rewrite their researched information as a means of developing their own skills in writing for children, and to provide much needed written materials for their students. These rewritten materials are now being made available in Data Card form.

Throughout the course, the Instructor involved the participants in cooperative planning. The participants selected their own topics of interest while planning together so that all topics were covered by some member. Class deliberation resulted in the highly useful data card format, with illustrations where possible. "The Cross Index of Four Informational Books on Hawaiian Culture," which is included in this publication, was a suggestion of the librarian participant. Processing of kits and scheduling of the monthly workshops for the coming year were also decided upon by the entire class.

The Instructor continued to provide further demonstration of teaching strategies and the role of the teacher. Discussions after the demonstrations were crucial in helping participants develop basic culture concepts and principles of culture study. The demonstrations and follow-up discussions also exemplified ways to guide the development of pupils' awareness to higher levels of understanding.

For example, the Instructor observed that in role playing, the "Hawaiians" were either neglecting to show or did not know about the very important role that religion played in the everyday life of the people. The Instructor demonstrated a guided discovery lesson by reading aloud sections on:

1). A fishing episode from Life in Old Hawaii;

2). A description of a dedication of a hale (house) from Ancient Hawaiians: Who Were They? How Did They Live?

3). A description of kapu (taboo) in the building of a heiau (temple) from a handout on religion by Mary Kawena Pukui.

The participants discussed their "discoveries" of insights about the Hawaiian religious culture from this experience. More questions were raised and additional research was necessary.

In a subsequent dramatization, growth was very evident in the role playing as participants incorporated their understanding about religion as it permeated the everyday actions of the people. In so doing, even more specific questions arose about the people and their culture. In a similar manner, other significant and abstract aspects of the culture such as the role of males, females and children or the relationship among the 'ohana may be brought out if the learners do not have the background initially to raise in-depth questions.

The participants' reactions also indicated a growing awareness of the importance of having an adequate background of information about the culture and major concepts common to cultures. This was apparent by the large number of books on Hawaiian culture purchased by the teachers for their own personal library collections. This was significant because the books needed during the course were available in the classroom library.

At this point, the Instructor gave a presentation using an overhead transparency of a chart showing the interrelationship of major culture concepts. The presentation summarized the collective thinking of the planning consultants on the importance of helping teachers to realize that while we may need to examine concepts in isolation for study purposes, these concepts were interrelated and occurred concurrently in the lives of the people. For example, religious practices were an integral part of the economics of making a living. Both of these activities were dependent on the resources from the natural environment. The chart was drafted by Consultant Marion Kelly to visualize and summarize the theme of the interrelationship among concepts as people solve the problems of living. (See Appendix)

The Instructor shared problems encountered in her own teaching experiences with children that did not emerge in working with adult learners. Some of these problem areas were:

1). How to work with students who do not ask questions;

2). How to handle the "know-it-all" student;

3). How to record questions without giving away the answers;

4). How to handle the initial negative or horrified reactions to unusual cultural practices;

5). How to judge when to provide needed information.

The Instructor demonstrated different levels of classroom questions using pictures, films, and other media as data sources. The participants then formed teams to practice the skill of questioning by using visuals. The creative use of text materials was also demonstrated and discussed. The

participants familiarized themselves with books on the ancient Hawaiian culture and with modern multi-ethnic materials written for students. Various films and other media resources were introduced to the class.

Several planned activities involving craft work and use of materials were experienced by the participants. In these activities, emphasis was placed on the involvement in the process rather than the finished product. During experiences such as making an object using wood, bone, or stone; building a hale using chopsticks; and trying out the many uses of the ti plant, the participants were asked to evaluate and analyze their thinking as they worked with their hands.

Responses indicated a deeper understanding and respect for the resourcefulness and ingenuity of the ancient Hawaiians as they solved the problems of living using the materials at hand. Other insights expressed were 1) the differences in concept of time in the past as compared to the present; 2) the appreciation for today's modern conveniences; 3) the differences in the pace of life, and 4) the appreciation the ancient Hawaiians must have had for the objects they made. The desire for more information was very evident as questions arose during the problem solving activities.

All of the activities were geared to "turn on" the participants to ways of motivating students before requiring reading assignments. The activities called for a high degree of involvement.

Throughout the four weeks of activities, the participants became very much aware of the unifying role of rituals in cultures. The first day of class had begun with a simple aloha chant. This chant, used in lieu of a pule or prayer which usually opens a Hawaiian gathering, became the daily opening ritual. The class members were continuously encouraged to develop the affective aspect of group living so important to the ancient Hawaiians, to themselves, and their students. The class discussed the effect of the daily ritual upon themselves. Several members generously shared their own experiences in 'ohana living and with ho'oponopono (setting to right) as they became more comfortable as members of the group.

In addition to being a member of the Institute 'Ohana, each participant found further identity as a member of a School District 'Ohana. Each District 'Ohana selected its haku or leader. Group activities, responsibilities, and decision-making were frequently delegated to the District 'Ohana.

Some valuable affective aspects of the Hawaiian lifestyle became a hoped-for living part of the culture study experience for the participants. It is also hoped that this, too, will become a part of the study in the classroom for their students.

As the weeks progressed, the 'ohana understanding grew as members shared, offered help, talked out problems and made decisions together. This close relationship has continued in the two years since the Summer Institute as various 'Ohana members have given so much of themselves and their time in editing and revising the materials to be shared with other teachers and students. The 'Ohana members have continued to get together at gatherings that combine professional growth activities and socializing.

FOLLOW-UP PHASE: WORKSHOPS AND CONSULTANT HELP IN THE FIELD, 1976-77

The follow-up phase was designed to support the teachers in implementing culture study in their classrooms. In the Fall of 1976, the Instructor visited each of the participants' schools to establish communication with each principal. As cooperatively planned by the participants, the entire 'Ohana met in follow-up workshops each month - alternating Wednesday afternoon sessions with Saturday all-morning sessions. Help through consultations, demonstration lessons, resource presentations, presentations at Bishop Museum by the Liaison Teacher-Consultant was also available to any teacher participant. The teachers received excellent cooperation from the District Superintendents and principals regarding the use of one Wednesday every two months for workshops. A high percentage of 'Ohana members showed their commitment by their attendance at the follow-up professional growth activities.

Workshop activities planned by the District haku and the Instructor included sharing of materials, ideas, and progress by participants. Saturdays also provided opportunities for field trips, guest lecturers, and craft sessions. The sharing sessions in which members discussed their successes and problems were invaluable in helping each one to grow. One teacher explained how she, her librarian teammate, and the consultants worked to put Data Card materials on cassette tapes for her students who had difficulty with reading. Others showed how they improved their Data Cards by coloring the illustrations and by color-coding the categories.

Some sessions helped the teachers to further their background of knowledge of the Hawaiian culture. For example, Dr. Kenneth Emory of the Bishop Museum gave an informative slide presentation on the uses of the ipu (gourd). The craft session that followed was divided into two parts: one group chose to make ipu musical instruments under the direction of a specialist, while others chose to make ipu masks with another specialist.

A historical and archaeological tour of the Waialua-Haleiwa community began in Lili'uokalani Church with a multi-slide presentation on the community. The slide presentation had been recently produced by the University of Hawai'i Ethnic Studies Oral History Project. The Instructor lectured on the founder of the church, Missionary John S. Emerson, then led the group to visit the site of the Emerson home. This was followed by a visit to a nearby heiau, a fishing shrine, and taro fields. A poi-pounding demonstration by the mother of a member of the 'Ohana and opportunities for members to pound poi completed the tour.

A study tour to Moloka'i was a special field trip requested by some 'Ohana members. The tour included stops at numerous historic and archaeological sites at the east end of the island such as 'Ili'ili'ōpae Heiau, one of the largest heiau in the state. It included a hike to Hālawa Falls with many archaeological remains still in evidence along the trail. Aunty Harriet Ne gave an evening presentation on sites and legends which proved to be one of the highlights of the study tour. An early morning hike down the scenic trail to Kalaupapa Settlement and a tour of the peninsula with an excellent guide provided another exciting and informative day on Moloka'i.

The newsletter, Ka Lono 'Ohana, was the chief means of communicating with each other. When more immediate means were necessary, the District haku was responsible for telephoning members within the District.

Twenty-two teachers in the school teams had fourth grade assignments during the 1976-77 school year. About one-fourth of the 'Ohana requested assistance from consultants. Those who did, made several requests. In the opinion of the consultants, those who requested help appeared to be more competent and confident. They were teachers who were continuously seeking ways to further improve their teaching strategies and were interested in enriching the experiences of their students.

Consultants assisted with planning, demonstration teaching utilizing the dramatic inquiry approach, team teaching to provide more opportunities for participation, and lecture presentations in the classroom or at the Bishop Museum. Two teachers planned with the Museum Liaison Teacher to take their students to the Museum several times for very specific lectures and demonstrations.

One request proved to be a real challenge and was solved by team effort. A teacher found that her students had difficulty reading the Data Card materials and available texts. The teacher, her librarian teammate, and two consultants worked together to make cassette tapes of the Data Card materials which were used with slides of artifact reproductions borrowed from an 'Ohana member. Because of this experience, the teacher made valuable suggestions for revision in format, simplification of sentence structure, and reading level of Data Card materials.

REQUESTS FOR WORKSHOPS AND MATERIALS

Personnel in the State Library Services, hearing about the work of the 'Ohana, requested a joint State Department of Education and U.H.M. College of Education workshop. The Instructor and the librarian-participant from the 'Ohana met with a member of the State Library Services and planned for a workshop to be entitled "The Contemporary Hawaiian Scene: Current Issues and Teaching Strategies."

Workshop planners were overwhelmed when 135 teachers and librarians appeared for the workshop on a Saturday in April, 1977. Those who attended the workshop participated in a demonstration using artifact reproductions with the dramatic inquiry approach. Five 'Ohana members shared their experiences on 1) using 'ohana concepts in the classroom; 2) using the "Index of Four Hawaiian Culture Information Books;" 3) utilizing the ahupua'a in which their school was located as a culture study base; 4) planning an overnight field trip around O'ahu; and 5) implementing a modern and historical community study. Sample Data Cards and the Index were reproduced for participants of this workshop. A panel of resource people spoke on "How Hawaiians Feel" about the Kaho'olawe issue, Hawaiian reparations, and schools.

In the fall of 1977, Hui 'Imi Na'auao o Hawai'i and the U.H.M. College

of Education co-sponsored a similar 'Ohana workshop at the Kamehameha Schools. The turnout of 130 participants again indicated a strong interest in Hawaiian culture studies. It was also apparent from the registration for these two workshops that teachers were eager to have materials for their students.

The 'Ohana now had the major task of editing and revising their materials for wider distribution. This became urgent as the State Social Studies Program Specialist made a definite commitment to seek funds to publish these materials for statewide dissemination. A dedicated group of twelve members from the 'Ohana worked with the Instructor as an Editorial Committee. The Committee members gave up a number of Saturdays, holidays, and summer vacation days over a period of 15 months to thoroughly edit and revise 175 Data Cards and 49 Teacher Information articles.

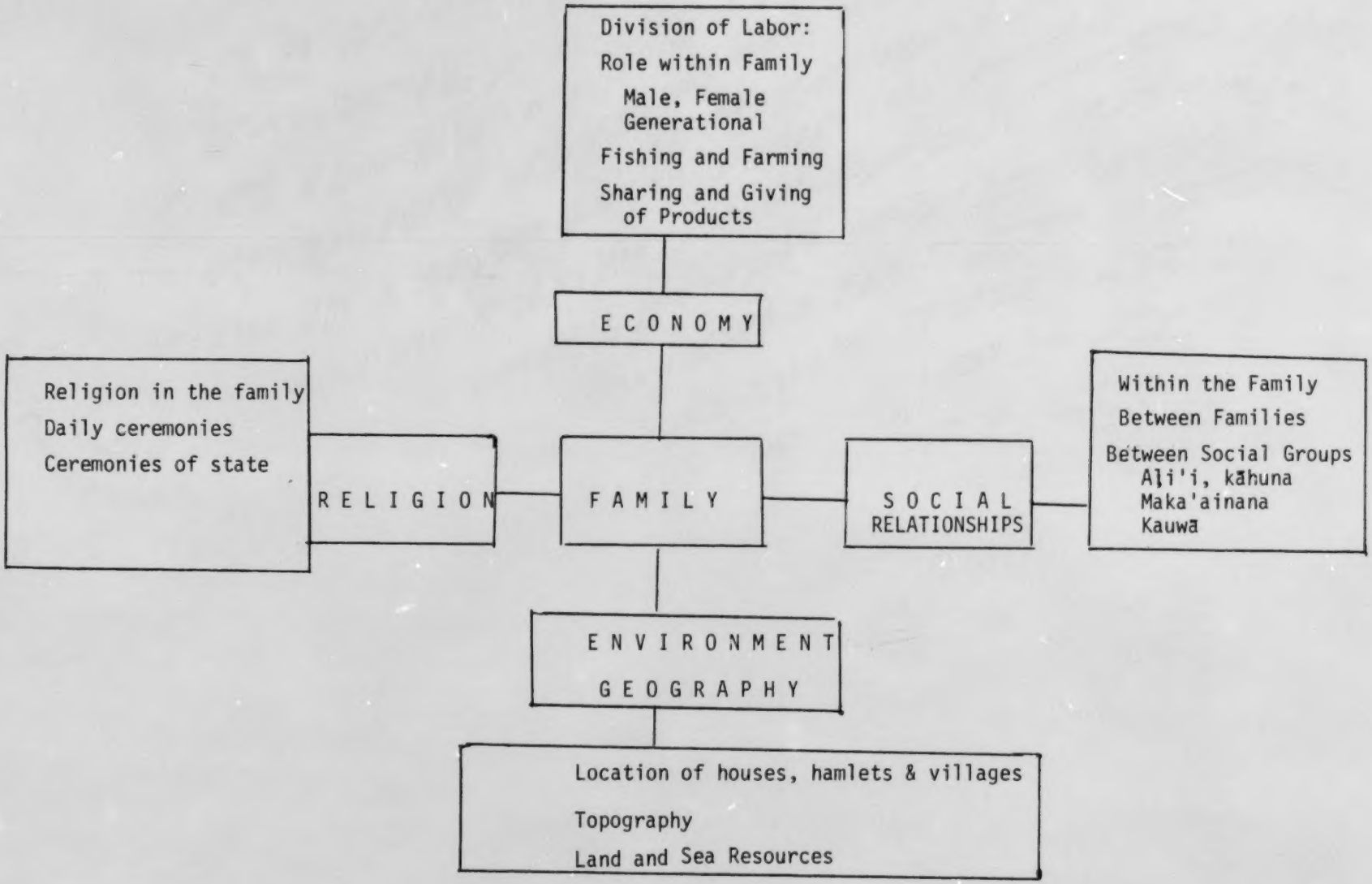
CONCLUSION

The results of the Culture Studies: Hawaiian Studies Project indicate the importance and potential of similar financially supported projects in in-service education. When given such support, the teachers in the Project demonstrated their willingness to look at themselves, to actively try new methods, and to develop meaningful teacher produced materials.

At the conclusion of the Institute, the 36 participants gave a very high rating in an evaluation of the course. The UHM Academic Evaluation Form had 66 items which covered the quality of course content, interest generated, techniques learned and skills acquired as a result of the course. It also provided an assessment of personal growth on the part of the participants in relation to the development of attitudes, values, self understanding, and understanding of other people. The instructor's teaching abilities and personal qualities were also evaluated. In the global appraisal section, the participants rated the course content at 4.7 and the quality of information at 4.7 on a 5 point scale.

The achievements and degree of professional commitment were described earlier in this report. The Project demonstrated what teachers can accomplish when provided with financial support and leadership.

Diagram by Marion Kelly



Project - 10

KIT of HAWAIIAN ARTIFACT REPRODUCTIONS

INSTITUTE FOR HAWAIIAN CULTURE STUDIES

A kit or set includes:

Quantity	Item
1	Poi Pounder
1	Ring Poi Pounder
2	Tapa Stamps (design)
1	Octopus Lure Hook
1	Bone Fishhook
1	Plummet Sinker
1	Hafted Adze
1	Stone Chisel
1	Coral File
1	Shark Tooth Weapon
1	Shark Tooth Knife - double blade
1	Gourd Water Bottle
1	Pump Drill
1	Stone Poi Pounder
1	Stone Lamp
1	'Ō'ō - digging stick
1	'Auamo - carrying stick
2	Koko - carrying nets
1	'Upena Ku'u - ocean net, 3' x 15'
1	Hohoa - rounded beaters
1	I'e Kuku - 4-sided design beaters
1	Platters (10 1/2 x 16)
1	Plate/Cover
2	Calabash (5" x 12")
1	Pū - helmet shell blowers
4	Moa - game dart
4	Ihe Pahe'e (2 1/2ft. spears)
4	'Ulumaika with stakes
4	Konane

Sources: Hawaiian Culture Studies Kit Materials
D. Hazama; Summer, 1976

Kālena
227 Kakahiaka Street
Kailua, Hawai'i 96734
(games: kōnane, ulumaika) No longer in business

Kamehameha Schools
Kapālama Heights
Honolulu, Hawai'i 96817
(other games)

Bishop Museum
Department of Anthropology
Box 6037
Honolulu, Hawai'i 96818

Kamezo Toki
c/o Philip Ninomiya
66-132 Haleiwa Road
Haleiwa, Hawai'i 96712
(stone poi pounder, lamp)

Waianae Hawaiian Heritage Cultural Center
85-067 Farrington Highway
Waianae, Hawai'i 96792
('ō'ō digging stick, instruction in netmaking)

House of Kalai
1727 Mary Street
Honolulu, Hawai'i 96819
(woodwork)

Hula Supply Center
2346 South King Street
Honolulu, Hawai'i 96814
(pū shell blower and musical instruments)

LIBRARY COLLECTION
CULTURE STUDIES: HAWAIIAN STUDIES INSTITUTE

HAWAIIAN CULTURE REFERENCES FOR ADULTS AND STUDENTS

Copies	Title	Author
10	Ancient Hawaiian Civilization	E. S. Craighill Handy, et al.
10	Polynesian Family System in Kā'ū	E. S. C. Handy, Mary Pukui
8	Polynesian Researches: Hawai'i	William Ellis
4	Hawaiians, An Island People	Helen G. Pratt
4	A Voyage Round the World, 1806 to 1812	Archibald Campbell
1	Native Use of Fish	Margaret Titcomb
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INSTITUTE FOR HAWAIIAN CULTURE STUDIES

A set of slides of most of the items in the Kit of Hawaiian Artifact Reproductions is included as a component of the materials from the Summer Institute of the Culture Studies: Hawaiian Studies Project. Each slide has a corresponding Data Card in the Data Card Box. The slides with the corresponding Data Card may be used together in a learning center or the slides may be used alone.

Slide Number	Subject
1	Poi Pounder
2	Ring Poi Pounder
2	Ring Poi Pounder
3	Tapa Stamps (design)
4	Octopus Lure Hook
4	Octopus Lure Hook
5	Bone Fishhook
5	Bone Fishhook
6	Plummet Sinker
7	Hafted Adze
7	Hafted Adze
7	Holding the Hafted Adze
8	Stone Chisel
9	Coral File
10	Shark Tooth Weapon
11	Shark Tooth Knife - Double Blade
13	Pump Drill
13	Holding the Pump Drill
14	Stone Poi Pounder
15	Stone Lamp
16	ʻŌʻō - Digging Stick
16	Holding an ʻŌʻō
17	ʻAuamo - Carrying Stick
18	Koko - Carrying Net
18	Using Koko Nets and an ʻAuamo
19	ʻUpena Kuʻu - ocean net
24	Calabash
25	Pū - Helmet Shell Blower
25	Blowing the Pū
26	Moa - Game Dart
26	Using the Moa
27	Ihe Paheʻe - Spear Game
27	Using the Ihe Paheʻe
28	ʻUlumaika with Stakes
28	Using the ʻUlumaika
29	Konane
29	Playing Konane
	Collection of Reproduced Hawaiian Artifacts
	Collection of Reproduced Hawaiian Artifacts

AN INVENTORY OF OVERHEAD TRANSPARENCY MASTERS

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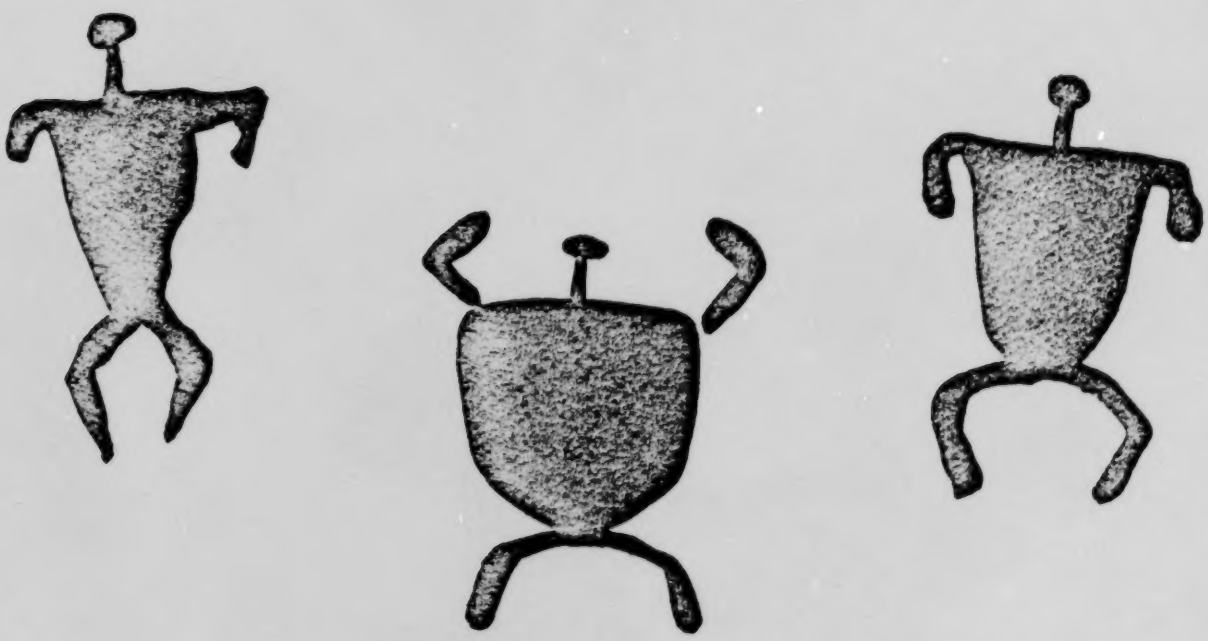
Hawaiian Culture
Teacher Information Materials

by

Participants
Culture Studies: Hawaiian Studies Institute
ED CI 586
Summer, 1976



HAWAIIAN CULTURE TEACHER INFORMATION MATERIALS

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THE ADZ

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The adz was the most important tool of the men in ancient Hawai'i. It is somewhat like an ax, with the cutting edge at right angles to the handle. Its Hawaiian name is ko'i. The blade was made from hard, close-grained basalt and occasionally from limestone, shell or hard wood. There were basalt quarries on each island, usually in the mountains. The most famous quarry which is on Mauna Kea is presently under archeological study.

Skilled adz-makers went high up the slopes of Mauna Kea after the coldest season was over. There they lived and worked at their profession with only fires and kapa clothing to keep warm. It is thought that the elements may have helped them as the changes in temperature broke off the chunks of basalt with which they worked.

The men studied and tested the rocks for hardness-any flaws in them would cause them to crack in the shaping process. They also had to find the right stones for the specific types of adz to be made. Heating was a means of testing and wood had to be brought up from miles below.

Before the actual working of shaping was started, the stone was placed in a bath made of juices of the fern and green kukui nuts. It was believed that this would soften the stone. (Malo)

The adz was shaped by chipping and grinding with other stone implements. Handles, when used, were made from hau or some other wood. Olonā or 'aha (coconut fiber cord) was used to lash the adz to the handle. A piece of kapa was placed between the adz and the handle to protect the lashing.

A variety of sizes and shapes were made, the largest weighing as much as twelve pounds. Tiny adzes weighing less than an ounce were used in carving idols.

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ANIMALS USED BY THE HAWAIIAN PEOPLE

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The animals listed and discussed below are animals that were already in Hawai'i or were brought to Hawai'i by Polynesian travelers.

Pua'a is the Hawaiian word for pig.
Pork was considered to be one of the more important foods for festivals and for religious ceremonial offerings. The pua'a was cooked in an underground oven called an imu. Young pigs were allowed to roam in the gardens and the homestead. As they grew larger and were ready for fattening, they were penned in stone enclosures. Pigs were fed scraps and peelings of taro, banana, yam, breadfruit and other plants. Women were not allowed to eat pork. The pua'a was thought to have the power of identifying persons of high rank. When the pua'a was used for this purpose it would roam through the group and when it "sensed" the person of high rank, it would lie beside him.

'Īlio is the Hawaiian word for dog.
The 'Īlio was described as being long bodied, short-legged, short-haired terrier-type. It was light in color; white to yellowish and brown to reddish. The 'īlio like the pua'a was used for food as well as for religious ceremonial offerings. They were bred and raised in large numbers as a prime article in their diet. The 'īlio was fattened on poi and sweet potatoes. Sometimes it was cut up and cooked in a calabash using hot rocks similar to boiling it. Many regarded the 'Īlio's flavor superior to that of pork. The long canine teeth were used for leg ornaments for dancers and for feather and wicker images.

Moa is the Hawaiian word for chicken.
Like the pua'a and the 'īlio, the moa was used for food and as religious ceremonial offerings. The moa was described as being similar to the fighting cocks used by the Filipinos today. The feathers of the moa were used for featherwork such as kāhili, ulī ulī, capes and cloaks. The moa was wrapped in ti leaves and cooked in an imu with coconut milk. Its flavor was similar to the chicken lū'au of today. The eggs were not eaten but were hatched to keep up the supply of moa.

Manu is the Hawaiian word for bird.
Below is a list of some birds the Hawaiians used for food and other uses:

kōlea	plover, migratory
nēnē	goose; hunted when moulting as it was unable to fly.
kioea	curlew, wader
koloa	duck
'alalā	Hawaiian crow
'ō'ū	a honeysucker used for food and featherwork

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THE KOA CANOE: THE WORK IN THE UPLANDS

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In old Hawai'i there were several kinds of canoes, as well as canoes of various sizes. The two basic forms were the single hull or outrigger canoe and the double canoe. There were different methods of construction and a variety of materials and woods used in canoe-making.

For this report, the canoe referred to will be the single-hulled koa canoe which was most prevalent.

Canoe-making was a very important profession. Very likely, one had a long and hard apprenticeship before becoming an expert canoe carver, kahuna kālai wa'a; and the more talented among the young maka'āinana were selected to learn the craft. A village could have a number of canoe builders. The ali'i had their own experts apart from the commoners.

The making of a canoe was a religious affair and throughout the construction, religion played an important role.

When it was decided to build a canoe, a suitable tree high in the uplands had to be selected. Some sources say that the 'elepaio bird was the key in the selection. If the 'elepaio was found to be pecking at the tree, it was turned down as it was probably worm-eaten, and another would be chosen.

The kahuna was informed, and he in turn began his religious rituals.

Malo states that the kahuna, upon sleeping in the heiau would evoke a vision. If there appeared a naked man or woman, the tree was rotten. However, a handsome well-dressed man or woman would mean they had found the right tree.

The kahuna and his party proceeded to the uplands with tools, food, and offerings of kapa, kūmū (fish), coconut, and 'awa to present to the mountain and tutelary deities.

An imu was dug near the tree and a pig roasted. Part of the food was offered to the gods and the rest consumed. Any scraps had to be buried lest any man should tread on them, or an animal consume them.

The tree was marked to show where the cutting was to be. One or more kahuna hewed with their adzes. Once the tree was felled, however, other craftsmen joined in. The top was cut off, branches and bark were removed. The kahuna then studied the trunk to map out how the canoe would be made.

Preliminary work was done at the forest site to lighten the load for the hauling to the beach.

Shaping included tapering the bow, ihu, and stern, momoa. The outer part of the hull was chipped and made smooth with adzes. Many workmen were required to keep the canoe-builders supplied with sharper adzes as they dulled.

The builder decided where the seat(s) would be placed and the center part was hollowed out. Now the canoe was ready to be hauled down to the beach where it would be completed. If it were a large canoe the whole village would be involved in this work. Ropes were attached to the bow and stern. Those forward were called ka po'e pale wa'a, the protectors of the canoe. Their task was to protect the canoe from rocks, trees, underbrush, cliffs, ravines, inclines, and anything that would obstruct the way. Men, women, and children took hold of the ropes. The kahuna appealed to his 'aumakua to take the boat safely to its destination. Chanters walked alongside and gave encouragement. At last the canoe was brought to the hālau waia, long house for the canoe, near the beach.

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(Children) Pratt: The Hawaiians, chap. 22 "Beginning a Canoe in the Forest"
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FINISHING A SINGLE OR OUTRIGGER CANOE

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A tree trunk roughly hollowed out into a hull was hauled down from the mountain to the sea and placed in a canoe shed (hālau). After a feast a kapu was placed on the hālau and only the kāhuna kālai wa'a and his craftsmen were allowed to complete the canoe.

Before the actual work began, the canoe had to be seasoned for several months. The hull was soaked in the mud of a taro pond which turned the wood a rich dark color. It was then left to partly dry.

The work began with the upper part being shaved down a fairly straight line. The sides were further shaped and smoothed. The hull was then turned over and the bottom rounded. The width diminished at the stern and bow. The butt end of the log was the stern which was deeper and wider than the bow. The width of the canoe was from 1 to 2 feet, sometimes 3 feet deep and the length was rarely more than 50 feet with exceptional ones about 70 feet long.

Many tools were used in finishing the canoe: a special swivel-headed adz, regular adzes, stone hammers used to tap the chisels in making lashing holes, pump drills, and several kinds of stone rubbers to smooth and polish the outer surface of the hull. The polishing was finished with sand caught in the meshes of coconut fiber or shark skin.

Another tool used was a wooden clamp which helped to hold down the gunwale while it was being secured to the canoe.

The hull was painted before the accessories were fastened. The paint was made of juices of plants mixed with charcoal. A coating of kukui nut oil gave it a lacquer-like finish.

An outrigger was attached to the canoe for better balance. The outrigger consisted of two parts. The 'iako, curved booms made of hau, and the ama or float made of wiliwili or hau. These woods were very light in weight. (See Buck's Arts and Crafts of Hawaii for details.)

Paddles ranged in length from 55 inches to 71 inches with an average of 62 inches. The blades averaged 23 inches wide. Gourds were used as bailers. Wooden scoops with handles might also have been used.

The canoe was ready for testing and then blessed before using.

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CARRYING POLES - 'AUAMO

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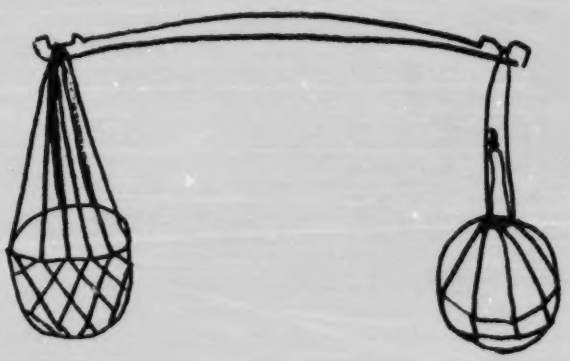
The ancient Hawaiians used carrying poles, 'auamo, to carry loads. These carrying poles were usually made of 'kauila* or 'ūlei;** however, other woods were also used. Existing poles (twenty-eight in Bishop Museum's collection) show these poles to be between 40 - 92 inches long and about 1½ inches thick. Usually poles had one to three notches at each end; however, the simplest and probably earliest form had no notch. It simply had angled tips to keep the supporting cords from slipping off the end of the pole.

The 'auamo was carried over one shoulder with balanced loads hung or tied at each end of the pole. Carrying nets (kōkō) supporting calabashes and water gourds were commonly placed on the 'auamo for transporting.

There were some differences in the notching of the Hawaiian 'auamo and other Polynesian versions of the carrying pole. The Hawaiian 'auamo showed the pole trimmed gradually from a wider middle to about one-half inch narrower at the ends. The other Polynesian carrying poles showed notching on poles of uniformed thickness from end to end.

More advanced, fancier versions of the 'auamo show human heads carved at the ridges (high points) between notches. These poles were called 'auamo ki'i because of the carved heads (ki'i). Only certain notable chiefs owned such carrying poles.

Although the 'auamo were primarily intended to be carrying poles, some also served as 'ō'ō (digging stick) or as pololū (weapon).



* 'Kauila is a hardwood.
** 'Ūlei is a highly bendable wood.

Sources: -Buck, Peter. Arts and Crafts of Hawaii. Honolulu, Bishop Museum Press, 1957. pp. 14-17, 40, 60.

-Bishop Museum. [Display - June 1976]

CHILDREN OF THE 'OHANA

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The 'ohana or extended family included: (1) mākua* who were the parent generation (aunt and uncles); (2) kūpuna* who were grandparents and all relatives of the grandparent generation; (3) keiki who were the children in the 'ohana considering themselves brothers and sisters to each other irregardless of natural parentage (Pukui: 162); and (4) 'ohua who were unrelated dependents and helpers.

In the 'ohana the hiapo or first-born child had his future clearly predestined before birth. Rarely was the hiapo reared by his natural parents. The hiapo was the "living history book," who memorized the family genealogical chants, social and religious customs, kapu and specialized skills and knowledge. He was to assume the responsibilities of family illness, dispute and other crises. As a result of his position, the hiapo often also became the favorite of the kupuna. (Pukui: 51)

The grandparent generation in the 'ohana had the privilege of taking as hānai the hiapo of one's children. The feeling was the hiapo belonged to the kupuna and the natural parents had the child on "loan" until he was given.

When talking to each other, the terms for brothers and sister were used for address as well as being descriptive. However, a son would not address his male parent as "father" because family member terms were only descriptive. Relatives, whatever their relationship, addressed each other by name. Addressing a grandparent as tutu is a modern day term. A grandparent was correctly addressed as kupuna in the old days. (Handy: 44-45)

A ceremony to decide whether or not a child was ready to be weaned placed the decision with the child. A mother and child would sit facing each other with two stones or bananas representing the mother's breasts placed between them. A prayer to the god Kū and his wife Hina was offered by a third person asking that the baby will no longer wish for his mother's milk. If the child reached for the objects and tossed the object away he was ready to be weaned. If he did not toss the object away nursing continued and the ritual was repeated again later. (Handy: 88-89)

Small boys from infancy to about five or six ate with the women and girls. They did not wear a malo. A ceremony called, "ka i mua," or "expulsion to the mua," which usually occurred when the boy was six, permitted a small boy to wear a malo and join the men in their eating house. (Handy: 9)

In the Hawaiian life cycle there did not exist any form of ceremonial ritual of initiation into manhood. At age seven or eight a boy was circumcised by a skilled kahuna and a feast was held. There was no significance to this event other than that the circumcision facilitated cohabitation and enhanced pleasure. (Handy: 94)

The informal and formal education of children was the responsibility of the kupuna. The oldest boy went to his paternal grandparents and girls to the

* = plural form; singular - makua, kupuna

to the maternal. (Handy: 101) Older children were usually charged with the care of the younger ones. The closest of emotional ties existed between the kupuna and mo'opuna or "grandchild." (Pukui: 129) If a child showed a special aptitude in an art which his grandparents could not foster, a kumu or kahuna was found and the child became a member of his household. The child's parents were responsible for the more laborious tasks. (Handy: 90)

Grandparents had special affection for certain children who were attractive and charming. These children were made "favorites". They were given special dishes and the best of everything. In Kā'ū, a "carnival" was held every few years for the display of each grandparents' favorites. (Handy: 101)

Each child had duties according to his size in such activities as planting and fishing, house-building, preparing feasts, working on irrigation ditches, taro terraces, walls and on ponds. A child's age was determined not by years but by the tasks he or she could do. For example:

"The size that enables him to carry a water bottle."
A two-year-old was given a small gourd full of water to carry from the upland.

"The size that enables him to carry two coconuts." (age five or six)

"The size that enables him to carry a smaller member of the family on his back." (age ten) (Handy: 178)

Children learned by watching and doing. To ask questions was considered bad manners. Children were taught that certain gestures were rude, offensive and might even bring death as an offended person may have consulted a sorcerer by way of revenge. Treating parents and grandparents with utter disregard of their feelings was not acceptable. Children were taught that they were not to behave in a bold manner toward strangers, ask for things, go through the premises of others without permission, claim something that was not one's own. These rude behaviors were called maha'oi. For children to interrupt a conversation was rude. The head was regarded as sacred; therefore, to pull the hair or strike the head of another was considered an insult. (Handy: 188-91)

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COCONUT (NIU)

by
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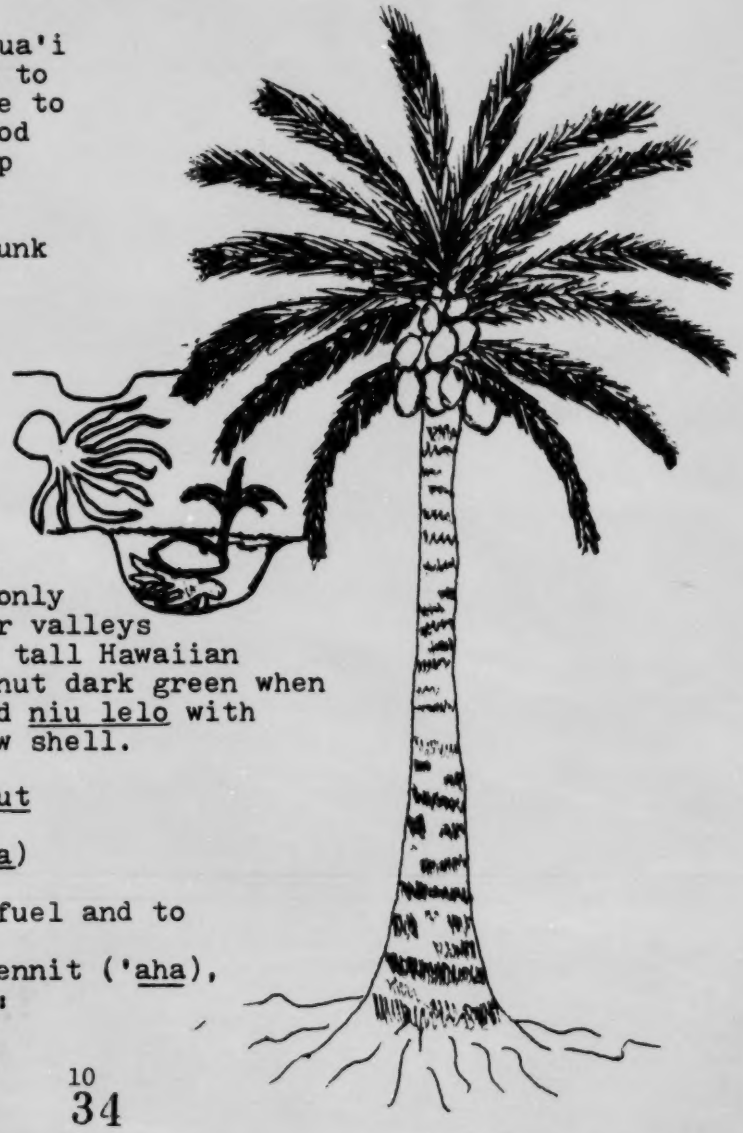
The ancient Hawaiians made extensive use of the coconut plant which is believed to have probably come from the shores of the Indian Ocean. Various parts of the trunk, fruit and leaves were used in many ways in their daily lives for food, shelter, religion, fishing, personal grooming, fuel, recreation, utensils and containers.

The Hawaiians planted and cultivated the coconut. Some of the ancient-time groves may still be found throughout the islands. In planting the Hawaiians placed an octopus (he'e) at the bottom of the hole as an offering. They believed that this would make the roots of the tree spread and grip the ground like the octopus' tentacles. The nut might also grow to be bulbous like its body. Actually, the octopus was excellent fertilizer for the young plant.

An early informant on Kaua'i said that if a tree was found to be unfruitful it could be made to bear fruit by driving lama wood pegs into the trunk as high up as a man could reach. In Kona another custom was to have a pregnant woman embrace the trunk of the unfruitful tree.



Coconut grows best 20° north and south of the equator. Because of Hawai'i's latitude, coconut grows well only in protected leeward shores or valleys near sea level. There are two tall Hawaiian varieties: niu hiwa with the nut dark green when mature and the shell black and niu lelo with reddish colored nut and yellow shell.

Ancient Day Uses of the Coconut

Husk, Fibers (pulu niu or 'a'a)

1. Husk as such was used for fuel and to polish canoes.
2. Fibers were used to make sennit ('aha), cordage which was used for:
   a. tying handles to adzes
   b. making nets to carry or hang calabashes

c. tying outriggers to canoes
d. caulking (making water tight)
e. making cables for canoe anchors
f. tying corpses in burial
g. making slings (ma'a), used with stones for weapons
h. making knee drum beaters
i. making sennit caskets (ali'i)
j. lashings in general

3. Fibers also used as strainers

Trunk, Stem (kumu)

1. Swollen base was used for making:
   a. calabashes (food containers-umeke)
   b. large hula drums (pahu hula)
2. Trunk was used:
   a. for making small canoes used near shore
   b. as posts for houses

Leaves (lau niu)

1. Fronds were used:
   a. for thatching for sides of houses
   b. as beaters to drive fish into nets (last 3-4 feet)
   c. for pounding and beating banks of taro patches with base end
   d. as kapu markers along shore where hau did not grow (end of leaf)
   e. as runners for little sleds (frond midrib)
   f. for sliding down hill (whole frond)
2. Leaflets (lau niu) were used in making:
   a. fans (pe'ahi)
   b. toy balls (kinipōpō)
   c. toy whistles
3. Midribs (ni'au) of leaflets were used in making:
   a. broom (pūpū ni'au)
   b. kukui nut candle
   c. shrimp snare (pulu 'aha)
   d. the games pala'ia and panapana nī'au
   e. musical instruments like the Jew's harp (nī'au kani)

Fibrous Leaf Sheath ('a'a'a)

1. Sheath ('a'a'a) was used:
   a. as wrappers for bundles of food
   b. as wrappers around bait which was used in deepwater fishing
   c. in transplanting cuttings or young plants (sheath wrapped around the ball of soil)
   d. in making ball of pala'ie
   e. as strainers

Whole Coconut (niu)

1. Coconut was used as offerings:
   a. when a tree was selected by a kahuna kalai wa'a (performed canoe building ceremonies)
   b. when a heiau was being built and when an 'ohi'a tree was selected to make the temple image
2. Coconuts were taken on long journeys for the liquid (wai niu) which was used as a drink

Flesh, Meat ('i'o niu)

1. Flesh or meat ('i'o niu) was:
   a. eaten differently at various stages of development:
      -half ripe, raw with red salt and poi
      -mature, usually grated, squeezed and milk extracted for cooking
   b. used as bait; coconut and baked kukui nut were pounded, wrapped in leaf sheath ('a'a'a) and attached to bait stick to attract fish
   c. mixed with salt solution and used to treat wounds
   d. used as chicken feed, after extraction of cream or oil
2. Coconut cream was used:
   a. in main dishes-cooked with chicken (more modern)
      -cooked with greens (spinach, lūau)
   b. in desserts-haupia; milk and starch (arrowroot, pia) boiled or baked in oven (imu)
      -kūlolo; milk and grated taro (kalo) baked in imu
      -cream and ripe breadfruit
      -cream and cooked sweet potatoes

Oil (mano'i)

1. Oil was:
   a. rubbed on bait sticks
   b. used for calming of sea water meat was chewed and spat on surface of the water
   c. rubbed on body and used as hair oil meat was grated and placed in container in hot sun; oil which separated from the meat was strained then mixed with maile, fern, and other fragrant plants

Shell (iwi pū niu)

1. Shells were used:
   a. as utensils, spoons and ladles (handles tied to spoons)
   b. as eating and drinking bowls and cups
      -cut in half lengthwise (olo) only used by priests
      -cut in half crosswise ('apu) for commoners

c. as containers for dyes
d. for making ʻuli ʻuli (musical instrument)
e. in the game kilu
f. as mortar to mash bait for fishing
g. as bull roarer

Modern Day Uses of the Coconut

The coconut is still being used today in many different ways. Listed below are a few examples of how the different parts are used.

Husk, Fibers:	1. Rope	2. Scouring Pads
Trunk, Stem:	1. Benches	2. Furniture
Leaves:	1. Hats 2. Fans	3. Mats 4. Broom
Fibrous Leaf Sheath:	1. Fire Starters	2. Arts and Crafts
Whole Coconut:	1. Art activities	2. Decorative Purposes
Flesh, Meat:	1. Canned and packages and sold in supermarkets (flakes, milk) 2. Copra	
Oil:	1. Suntan lotion	2. Hair oil
Shell:	1. Purses 2. Hanging planters	3. Buttons

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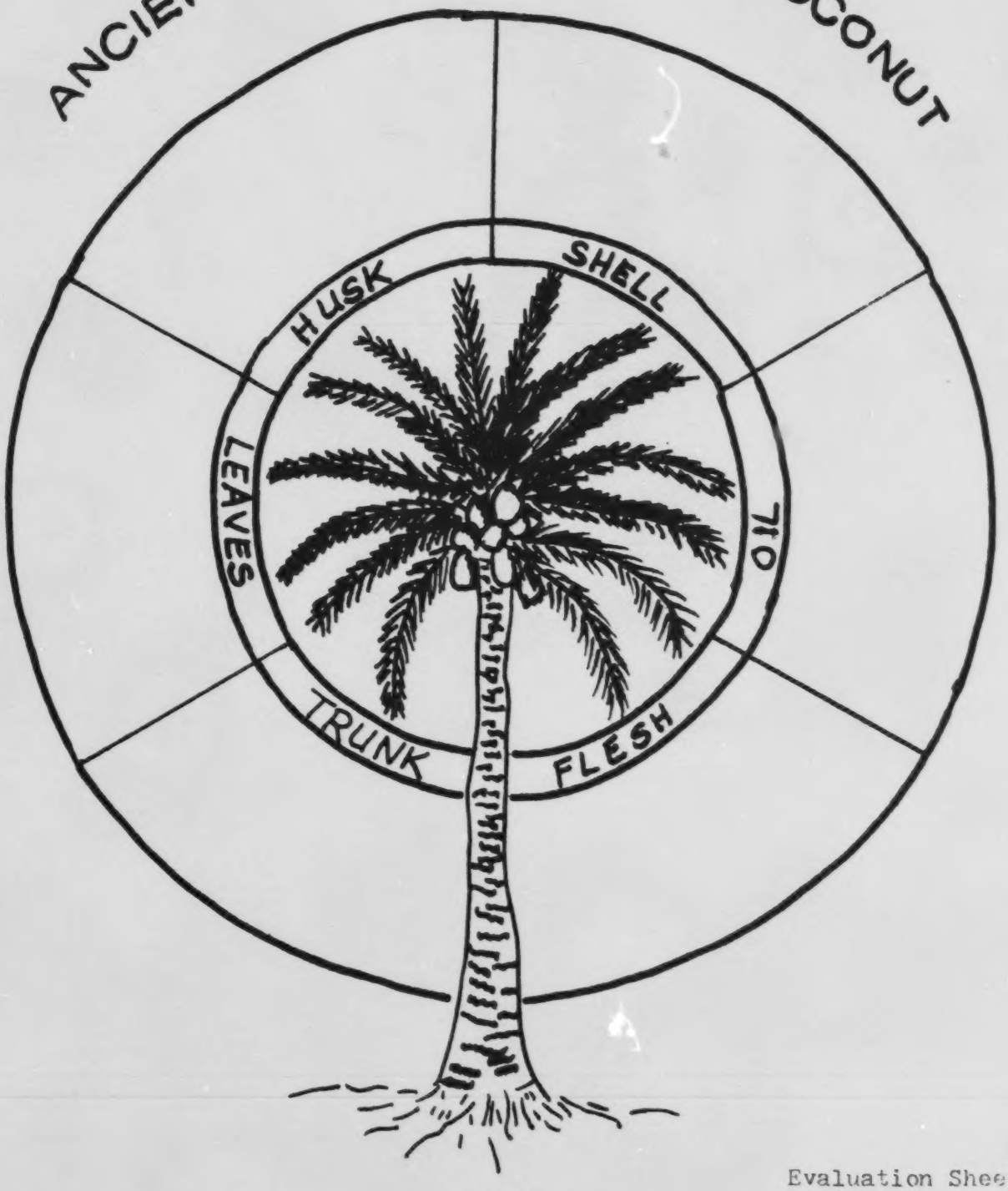
Suggestions

1. Used attached enlargement of the coconut plant on the board or on a chart to help label and identify the parts.
2. Make an overlay tranparency to accomplish same.
3. Remove lower leaflets from fronds before they are used by children for midrib activities--pala'ie and to string kukui nuts as a candle
4. Prepare kukui nut candle for use as introduction to section on midrib.
5. For midrib activities, limit partners for each choice-broom, kukui nut lamp, crab snare.
6. Use retrieval chart, "Ancient Day Uses of the Coconut"-whole class chart or individual study chart.
7. Use similar chart for "Modern Day Uses of the Coconut."
8. Use above charts for class discussion on Comparative Uses of the Coconut.
9. Show film-Legend of the Niu by George Tahara.
10. Have students experience cooking with coconut using attached recipes.

ANCIENT DAY USES OF THE COCONUT



Evaluation Sheet
Adapted from The
Kamehameha Schools
Explorations Book, '7
Inst. for Cult. Std.
L. Fujiwara, L. Kido

ANCIENT DAY USES OF THE COCONUT

Institute for Culture Studies

TRUNK - STEM	LEAVES LEAFLETS	NIDRIBS (NĪ'AU)	LEAF SHEATH
HUSK	SHELL	FLESH, MEAT - OIL	WHOLE NUT (NIU)
41			42

HAUPIA
Hawaiian Coconut Pudding

Quantity Recipe	Home Recipe
For each gal. of coconut milk use:	1 C. coconut milk
1½ C. of cornstarch	1½ Tb. cornstarch
1½ C. of sugar	1½ Tb. sugar
2 t. vanilla (optional)	Few drops vanilla (optional)
Makes 35 servings	Makes 4 servings

Add a cup of hot water to the grated meat of each mature coconut. Squeeze through a poi cloth or cheese cloth to secure the coconut milk.

Boil the coconut milk in a heavy, thick bottomed pot.

Mix the cornstarch and sugar with some of the coconut milk until the mixture is quite thick. When the coconut milk comes to a rolling boil, add the cornstarch-sugar mixture, stirring constantly. This should boil for 10 minutes or more. If a candy thermometer is used, the mixture should be heated to 160°F. One indication that the haupia is done is that the mixture tends to free itself from the sides of the pot when stirred. The vanilla is added after the heat has been turned off.

Pour into waxed-paper-lined cardboard candy boxes or pans when the haupia is slightly cooled. Chill. Cut into squares and serve on a portion of ti leaf.

CAUTION: Do not use coconut milk that is too rich. Thin with water or milk.

KŪLOLO
Taro-Coconut Pudding

Quantity Recipe	Home Recipe
25 lb. raw taro	2 medium taro
Milk from about 20 coconuts	Milk from 3 coconuts with the coconut water
4 boxes brown sugar or	3 Tb. brown sugar
2 boxes brown sugar and 2 C. honey	2 Tb. honey
2 to 6 C. finely grated coconut meat may be added if desired	½ C. finely grated coconut meat may be added if desired
Serves 100 persons	Serves 10 persons

Quantity Recipe Cooked in an Imu

Mix the grated taro, sugar, honey and part of the coconut milk. Add more coconut milk as needed until the mixture is as thin as pancake batter. Most people must rely on the proportions in the recipe as this mixture cannot be tasted for sweetness without real danger of the calcium oxalate in the raw taro causing painful itching (mane'o)in the mouth and throat. Persons with tender skin may be irritated on the hands and arms by the grated taro also.

This mixture is poured into five gallon tins which have been lined with ti leaves. The tins, two-thirds full, are placed in a hot imu and baked all night. When removed, the kūlolo is cooled, sliced and served on a piece of ti leaf.

Home Recipe Cooked in an Oven

Mix the finely grated taro, sugar and honey and add coconut milk until the mixture is thin. Do not taste! Place in greased baking pans, cover with ti leaves and foil and bake in a 325°F. oven for 2½ hours. Cool, slice and serve.

Activity Sheet #2
Taken from the
Kamehameha Schools
Explorations Bk. '74

CONSERVATION

by Naomi Yap
Institute in Hawaiian Culture Studies

The ancient Polynesians brought with them a vast knowledge of farming. Mitchell (6) explains that "Hawaiian farmers, aided by the fishermen, were able to produce the food needed by some 300,000 people. ...In contrast to our skilled agricultural accomplishments, we have to import more food than we produce. ...Captain Cook and other early visitors wrote of the Hawaiian's intelligence and thrifty use of land and water, of the abundance of the food produced, and their knowledge of the conservation of their resources." Each step in the ancient Hawaiian agricultural practice was accompanied by extensive ritual and religious observances.

LAND:

A considerable amount of labor was put into terracing and preparing wet land kalo patches. They were used over and over again. This made it necessary to supply some kind of fertilizer. The ancient Hawaiian knew about making compost to restore the nutrients taken from the ground. When weeds were pulled from the ground, instead of throwing them away, they were left to decay and add humus to the ground. Grass was also used as a mulch. Wichman (10) tells us that the leaves of the hau tree had the ability to restore sour acid land. "When the wet land taro patches got sour, and the crops were poor, the farmer believed the Goddess Laka was not pleased. Setting out to restore the land, he wore a lei, and went out to the wild growth along the rivers and cut young hau branches, and threw them on the field. The field was left to lie until the hau had rotted in the patch. Then taro was planted again. The Hawaiians knew how to enrich the soil and treat it well so that its value would not be destroyed."

When the ancient Hawaiian farmer was ready to plant, he burned the land and waited for steady rains. This was reckoned as the beginning of farming. Then came another rain, a steady rain, making the burned place soft. Again a steady rain, this time in the evening (9).

WATER:

Water conservation was also important to the ancient Hawaiian. There were several laws and kapu that governed water rights. Pratt (8) explains that "the water rights belonged to the land, not to the people cultivating it. Old water rights from streams and springs always went with the land. A person owning land on both sides of an a'uwai cannot, for example, build a high dam in it to make a swimming pool, if it takes too much water from the land below."

The konohiki was the luna or overseer for his district and upkeep of the a'uwai. He measured the amount of water a farmer could have by the time it took to flow into a taro patch. The size of the patch was not a determiner, but rather the amount of labor contributed to the construction.. The distance from the source of supply was also calculated. The konohiki could decide to change the water rights for example to a man who did a great deal of extra work on an a'uwai. During the time of a drought, he could redistribute the water to another patch before the first one was full.

According to Nakuina (7) "in ancient times the holders of a water right were required whenever it became their turn in the water rotation to go up with the luna wai (superintendent) to the water head or dam to see that it was in proper condition. All obstructions which may have fallen in or had been carried down by the water during the night had to be removed." The author goes on to say that these customs were strictly enforced. If the water right holder neglected his duty, or did not send a substitute, water would be withheld from his land. The derelict might also be given an order to vacate the holding and thus be deprived of both land and home, and become a kauwā (an outcast), a condition much dreaded by the Hawaiians.

FISH:

The Hawaiians were strict conservationists in their fishing practices. They enforced closed seasons during which no fish of certain species could be caught. Some fish, such as moi, were kapu to all save the chiefs. During the periods of the year when it was kapu to fish along the shore, deep-sea fishing was open. At certain times of the year, certain kinds of sea weeds were kapu since they were also food for the fish. They were careful not to deplete the sea life from any one area. A human caught only what he could use and releasing any immature fish.

Fishponds were built to raise and hold fish until ready for consumption. Storms and the kapu prevented the fisherman from going out whenever he liked. This "ancient Hawaiian refrigerator" served to store one of his most important food supplies. The fish in the ponds belonged to the chief; the fish could be shared with the commoners when they came to clean or mend the walls of the pond.

BIRDS:

Ancient Hawaiians also practiced conservation in feather gathering. The feather gatherers knew when the birds were moulting. The birds were rarely killed. They were snared with a sticky gum from the breadfruit tree sap. A few selected feathers were plucked and the birds were freed. When most of the feathers were needed from a bird, then the bird was killed and eaten.

Today many native Hawaiian birds are extinct. Bryan (1) notes that perhaps this is because of "the changes in the forests due to man and his introduced animals, and foreign birds and their diseases against which the native birds had no immunity."

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A Description of Family Property in Ancient Hawai'i; How Ownership Was Defined; Factors That Determined Family Residence

by Margaret C. Young
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Private land possession and land division as we know it, was unknown to the early Hawaiians. Kings and chiefs did practice certain kinds of private property rights; but it was not until the Great Mahele of 1848 that these practices were legally sanctioned. Prior to 1778 sovereignty and land ownership belonged to the gods. In actual practice the ali'i nui managed the land. Chiefs and commoners acquired land as it pleased the ali'i nui. Through their labors Hawaiians earned the right to use the land and the sea, though not without having to pay heavy taxes and services for the privilege. The commoners, bound as they were by a tradition of subservience to the ali'i, were free from one ahupua'a to another. In addition, to a large extent, it was their task to insure production which had to support the consumption needs of the community. The ali'i in turn was expected to look after his people.

The largest measure of land was an island or moku-puni, controlled by the major chief of each island. An island was divided into several moku. O'ahu had six moku. A moku was further subdivided into segments known as the ahupua'a often granted to lesser chiefs by the major chief. The moku and many ahupua'a ran from the mountains to the sea. Ahupua'a literally means "altar of the pig". The altar was erected along the road at a point where two land boundaries intersected, and it was there the yearly tax was deposited.

Land areas in the ahupua'a were not permanently set but could be realigned as the result of war or by the decision of the ruling chief. As a rule, faithful tenants cultivated the same land for generations.

Narrower segments, or 'ili, within the ahupua'a were given to lesser chiefs and family groups. The 'ili was believed to be the original province of a single 'ohana or family group.

Most 'ili ran from seashore to mountaintop so that each group could have fishing rights, beaches, village sites, cultivatable slopes and valleys, and a variety of forest types to supply their needs. The more productive areas were reserved for planting.

Within their own land divisions, people from the three areas maintained contact with each other and this was made easier since many families had members in each area. The surplus or abundance of each area were shared and exchanged which resulted in the distribution of foods, raw materials, utilitarian articles and services among the people living in the total land division. Each household felt a voluntary kind of obligation to share what they had which is unlike our idea of trade or barter. The 'ohana functioned as a unit in social as well as economic affairs. This resulted in a genuine community spirit. There always existed an intimate relationship between the people and the land.

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DID THE HAWAIIANS BARTER?

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There was no medium of exchange in old Hawai'i. Trade was a matter of exchange of goods, mostly within the family or between related households. In Hawai'i there were no markets, owing to the fact that there were typically no villages but only scattered homesteads between which informal exchanges were constantly going on. Evidences indicate that this system prevailed in Ka'ū and Kona on the island of Hawai'i. Kawena Pukui'i has learned from modern informants on Ni'ihau that the same system existed on that island in the old days. In view of the fact that southernmost Kā'ū and northernmost Ni'ihau represents extremes of the Hawaiian Islands, we conclude that this system was universal in old Hawai'i.

The planters did not have a calculating mind. He was not a trader. There being no density of population, and such as there was being dispersed rather than concentrated in villages, there was a sharing and giving and receiving instead of trade. These stemmed from motives of practicality, sympathetic interest in the general welfare of the scattered family group or 'ohana, and as a matter of self-respect. Generosity was admired, and it enhanced both self-respect and prestige. His relationship to akua (gods), kāhuna (priests), and ali'i (chiefs) was less a matter of calculation or expectation than of affectionate dependence, mixed with reverence, awe, and sometimes fear.

True Hawaiian communalism was exemplified by the custom of exchange among the 'ohana inhabiting the inland and shore sections of the various districts. A fisherman needing poi or 'awa would carry up to the house of a relative in the inland planting area his fish, squid, or lobsters and return home with a carrying pole laden with bundles or taro corms or bundles of pa'i'ai (hard poi), or perhaps bananas and 'awa roots, with some stalks of sugar cane thrown in for good measure. A shore-dwelling woman would take up her baskets of shellfish and edible seaweeds, perhaps a gourd or coconut, and return with bundles of mulberry sticks, ti leaves, sugar cane, or possibly medicine required by some sick member of the family.

Actual trade did exist, however, between localities where there was a surplus of goods. Waipi'o, the deep canyonlike valley on the northeast coast of Hawai'i produced a great deal more taro than was consumed by the inhabitants. In the form of great rolls of pa'i'ai (hard poi), quantities of taro processed and ready to be made into soft poi were shipped out. The bundles were towed out from shore and transported to Hilo or Kohala, where taro was not very abundant. Waipi'o was not blessed with good fishing grounds. Presumably fish was preferred item accepted in exchange for the pa'i'ai.

Many wiliwili trees formerly grew on the semi-arid slopes between the forest and the sea in Kā'ū. The wood of this tree is very light and bouyant and makes the best outriggers. Canoe making was the industry of Kona, but there were few wiliwili trees in that district. Wiliwili wood was therefore traded to canoe makers in Kona in exchange for koa logs for fashioning canoe hulls in Kā'ū, for koa trees were abundant in Kona. Puna had much pandanus for mat making, but no particularly good areas for fishing. Pandanus was therefore exchanged for fish with the neighboring areas. But commercialism as such in the olden days was rare and was frowned upon when it came to light.

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FEATHER-GATHERING BY THE EARLY HAWAIIANS
by Elsie Durante
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In ancient Hawai'i feathers were highly prized and valued for they were used in the construction of sacred idols and and were made into beautiful cloaks, capes, helmets, lei, and kāhili. These were used only by the ali'i.and were emblems or symbols of royalty. Later with the arrival of Captain James Cook, these feather works were traded for coveted goods such as metal from traveling sea captains and traders.

The birds with bright plumages were the property of the ali'i of the land and were protected by strict kapu. Those ahupua'a where these birds abounded were heavily taxed and much of their taxes or tribute were paid in prized red and yellow feathers to the ali'i nui.

A special group of hardy and adventuresome men were retained by the ali'i to hunt the birds and collect the precious feathers. These bird hunters, were professional fowlers, who endured many hardships, such as cold, privation, and loneliness in their quest for feathers.

The bird hunters had much patience and skill and were keen observers of nature. They knew all the haunts, habits, foods, and songs of these forest birds, as well as, the seasons when the plumage was at its best. Feathers from these birds were gathered during the moulting season, when the forest trees were in full bloom and the birds came out to feed.

Although several kinds of feathers were used to make the feather articles, the most prized were the yellow of the mamo and 'ō'ō, and the red of the 'i'iwi and 'apapane. These birds along withe the 'ō'ū, whose green feathers were also used, were inhabitants of the wet upland forests in the mountainous regions of the larger islands.

The rarer birds like the mamo, were seldom killed, but were captured alive. When the few feathers that were desired were plucked, they were released to renew their plumage for the next moulting season.

The more common birds, or those that couldn't survive the loss of nearly their entire plumage, like the 'i'iwi, 'apapane, 'ō'ō, and 'ō'ū, were killed, skinned, and eaten.

Several methods or techniques were used in capturing the birds. Bird lime, a sticky substance made from breadfruit gum or kukui tree gum was smeared on poles. These were then placed in the trees where the birds perched. The feet of the birds stuck fast when they alighted on the sticks. If the bird was to be released, its feet were carefully cleaned with oil (probably kukui) so that it wouldn't become entrapped again. Another way was to put the bird lime on the branches of the trees themselves. However, after the hunt these

branches were broken off so that no bird would be trapped and die unnecessarily.

Sometimes live birds were used as decoys to attract other birds. Also nets of light cordage and large mesh were skillfully thrown over the flying birds. Snaring with cordage and catching the birds with their bare hands were other ways the bird hunters caught the forest birds.

Feathers from larger birds, such as the owls (pueo), crows ('alalā), tropic birds, both the red and white tailed, (koa'e 'ula and koa'e kea), the frigate bird ('iwa), and the Hawaiian goose (nēnē), were also gathered and used mostly in the construction of kāhili and to dress idols.

Other methods such as pelting with sticks and stones, use of coverts or blinds, taking by hand in rookeries (sea birds) and the use of wide-mouthed nets into which the birds would walk on their way to roost, along with snaring, were developed and used in capturing these larger birds. The method used depended on the kind of bird and it's habitat.

Our knowledge and information on feather-gathering is still incomplete. Within 50 years from the arrival of Captain Cook, construction of feather cloaks and capes had ceased and so had the gathering of feathers.

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SUPPLEMENT TO "FEATHER-GATHERING BY THE EARLY HAWAIIANS"
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List of Birds Whose Feather Were Gathered and Used in Feather Work

Forest Dwellers

'i'iwi: a bright red bird, in former times the most abundant. It s breast furnished the main supply of red feathers. Rare today, it is found on Hawai'i, Kaua'i and Maui.

'apapane: crimson above with a brighter crown. It's still found today on all major islands and is probably the most abundant of the endemic birds.

mamo: is extinct today. It was confined to the island of Hawai'i. It's deep yellow feathers obtained from two tufts on either side were the most highly prized. The Kamehameha Cloak, is composed wholly of these feathers.

'ō'ō: Its brilliant black and yellow feathers were used in capes and cloaks and grand kāhili. It was also a favorite article of food. Only one species survives today on Kaua'i.

'ō'ū: supplied the green feathers used in lei hulu manu and two known capes. This bird is very scarce today, but can be seen on Hawai'i and Kaua'i.

Mid-Land Birds

pueo :(Hawaiian Owl) were caught with special snares which were placed near its burrow. It's feathers were used for kahili.

'alalā: (Hawaiian Crow): was found only in the southwest part of Hawai'i. It was caught in snares and its black feathers were used for kahili and to dress idols.

nēnē: (Hawaiian Goose): was the largest of the native fowl. Its feathers were prized to decorate kahili, and it was relished as food. Once an endangered species, it has been re-established on Hawai'i and Maui. It is the state bird.

Marine or Sea Birds

Koa'e kea (White-Tailed Tropic Bird): breeds among the loose rocks of bird islands or on ledges of almost inaccessible cliffs on O'ahu and other main islands. The long tail feathers of the adult and the molted plumage of the young were used in kāhili.

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koa'e 'ula (Red Tailed Tropic Bird): is found occasionally on Ni'ihau and is abundant on Nihoa and Necker Islands. The red tail feathers were highly valued and the white body plumage was also much in demand for capes although little remains in museums.

'iwa (Frigate Bird): is also called the Man-of-War Hawk. It was hunted for its long black metallic-tinted feathers, both for cloaks and kāhili. It is common in the nesting season on Necker Island. In ancient days fishermen made frequent trips to Nehoa and Necker Island.

Domesticated Birds

moa (Hawaiian Jungle Fowl);wild fowl had long legs and brighter plumage. Domesticated fowl ate scraps such as grated coconut and skins of taro. Feathers were used in kāhili and capes and cloaks.

HAWAIIAN TERMS FOR FEATHER ITEMS

'ahu'ula: feather cloak or cape

kāhili: feather standard, symbolic or royalty.

lei hulu: feather lei, formerly worn by royalty

mahiole: feather helmet

As defined in: Pukui, Mary Kawena and Elbert, Samuel H., Hawaiian Dictionary, Honolulu, University of Hawai'i Press, 1971.

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HAWAIIAN FEATHERWORK ARTICLES
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All featherwork may be considered as symbols of royalty, rather than clothing. Even the great cloaks, though they might cover from the shoulders to the ankles, were not clothing, but were instead, signs of rank in the social system. Clothing worn by the ancient Hawaiians were made of kapa.

The principal colors of Hawaiian featherwork were red and yellow with a lesser use of other colors. Throughout Polynesia, red was considered a sacred color. The Hawaiian name for feather cloak is 'ahu'ula. 'Ahu meaning garment worn around the shoulder and 'ula meaning red. In Hawai'i yellow feathers, which were rarer, came to be considered the most prized. Even after yellow superseded red as the color of the high chiefs and gods, cloaks were still called 'ahu'ula regardless of color.

Articles made of feathers symbolized social rank and spiritual power. In ancient times all cloaks, capes and helmets were reserved for use by the male ali'i. Long feather cloaks were symbols of the highest rank and prestige. Chiefs of lesser rank wore shorter feather capes and helmets.

Feather cloaks and capes were worn only on ceremonial occasions or during battle, and those of losing chiefs could be taken as battle prizes by their conquerors.

The foundation of the feather cape or cloak was a closely woven net of olonā fiber tied with fishermen's knots. The mesh was so small that the ordinary netting shuttle could not be used. A fine form of the net mender was used. The fine net mender consisted of a round stick of wood cut down to form a shoulder at the end of the handle trimmed to a long slender prong with a blunt point. The net mender was about 0.33 inches in diameter and 6 inches long. The olonā cord was attached near the point by two half-hitches and a number of loops were added by means of half-hitches. For a very fine mesh, a piece of coconut leaflet midrib (niau) was used.

The netting was cut to the required shape, but it was rarely that a cape or cloak could be cut from one piece of netting. Some capes have a median gore with two side pieces; others have pieces of different shapes and sizes fitted together. The edges of adjoining pieces were fasted together by a separate cord running alternately through the meshes. The upper and side edges were bound with an 8 ply square braid of olonā. The lower border was left free. The Hawaiian craftsman tied his first row of feathers along the lower border, starting on the left and working toward the right. A large cloak could weigh as much as 6 pounds.

Fibers or olonā were used to fasten the feathers to the net. Small tufts of feathers were securely tied to the net in overlapping rows, like shingles. Only skilled men did this work.

The most common designs were geometric and were thought to be purely decorative rather than symbolic.

The base for feather helmets (mahiole) was made from the 'ie'ie vine, woven to fit the shape of the wearer's head. Over this was formed a netting of olonā mesh with feathers tied to it.

Kāhili were made with feather banners, symbols of rank and power. Special kāhili were those having bones of conquered enemies in the handle. The Hawaiians attached a particular significance to bones, believing they had mana, spiritual power. There were large and small kāhili and they were dismantled after they were used for storage.

Lei hulu or feather lei were made as ornaments for royal women. The lei was worn on the head or neck. Lei were made all of one color or of different colors. Lei were made in varied styles.

There are several unusual articles of featherwork in the Bishop Museum. Examples are, the Sacred Sash of Liloa and a feather pā'ū made for Princess Nāhi'ena'ena.

The Sash was made for King Liloa. It was conferred on each successive ruler and is shown on the statue of Kamehameha I in front of the Judiciary Building. The sash is covered with feathers on both sides and one end hangs down in front like a loin cloth.

Princess Nāhi'ena'ena's feather pā'ū was the only known feather pā'ū. She wore it only once in 1825. At her death, it was cut in half and used as a pall over her casket. It was used as a pall for succeeding monarchs.

Today, as in days past, featherwork is still a treasured possession of the people.

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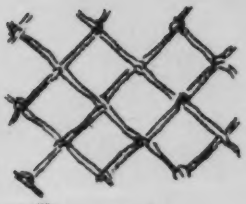
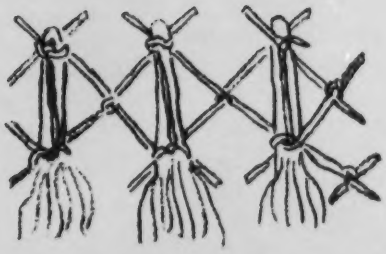


olonā netting

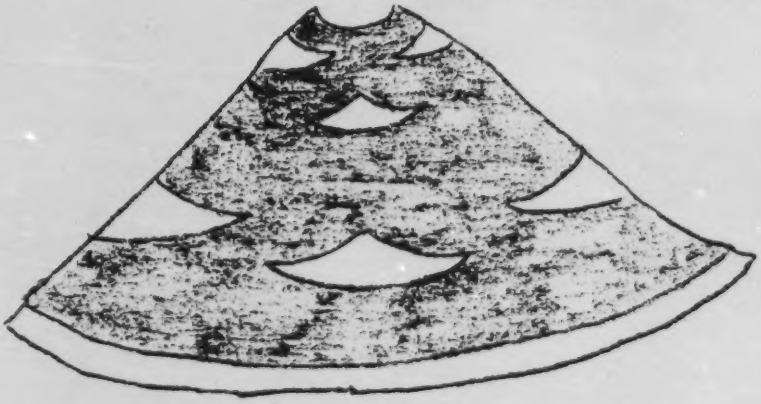
net mender or "ki'oe"

spiral tying of feather bunches



Tying of feather bunches to net

a type of feather cape
(crescent motif)



a type of feather cloak

DEEP-SEA LINE FISHING

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Fishing was the most varied and extensive food-procuring occupation of the Hawaiians. Agriculture, though of great importance, did not require the varied tools and methods necessary for fishing. The farmer knew well the limited plot of land he had for culitvation, but the fisherman had to know the character of the bottom of the sea both within and beyond the reef.

Beyond the reef, the sea bottom gave up its hidden sources of food only to the expert fisherman. Up to 20 fathoms, he could explore the bottom visually after chewed roasted kukui nuts were spat on the surface to aid visibility. He saw squids on the bottom and lowered his squid lure. He went to places frequented by the uhu fish and watched them enter his dip net attracted by the antics of a decoy which he manipulated from above with a line. Beyond the 20 fathoms depth, he discovered fishing grounds by experimenting with group bait (palu) and baited hooks. Profitable grounds were fixed by taking cross bearings with prominent land features. Knowledge acquired by successive generations of fishermen was handed down, adding to the equipment of practical knowledge. The fishing grounds ranged from shallow depths of 80 fathoms to depths of 400 fathoms.

Those who wished to fish in the deep ocean sought out these fishing grounds and kept them secret. They pointed out their secret fishing grounds only to someone carefully chosen to carry on the tradition.

Deep-sea fishing was men's work. The deep-sea fisherman was equipped with a canoe and large and small fishing lines, hooks, lures, ropes, sinkers, plummet sinkers, and nets depending on the kind of fishing he planned to do. If he had bait, he would take that along. Sometimes he fished for bait before heading out to the open sea. Deep-sea fishing usually was a team effort requiring two or more men.

Some of the kinds of fishes caught were aku, opelu, uhu, mālolo, ahi, and sharks. Lobster, squid and octopus were also caught. When the fisherman returned to shore, the fish for the gods were separated and the rest of the fish were divided among the people.

The old Hawaiian fisherman was a skilled and selected person. He had knowledge of and respect for, the traditions and customs of fishing. He was careful to observe these customs, because through them, fishing was preserved for the coming generations. The person he selected was trained in the skills he would need to become an expert fisherman.

Another type of dip net was made of two flexible rods supporting a square or rectangular net. There was no bag in the net until the weight of the crab or fish brought the ends of the sticks closer together. (Figure 2)

Figure 3 illustrates a simple dip net for catching small fish and 'ōpae.

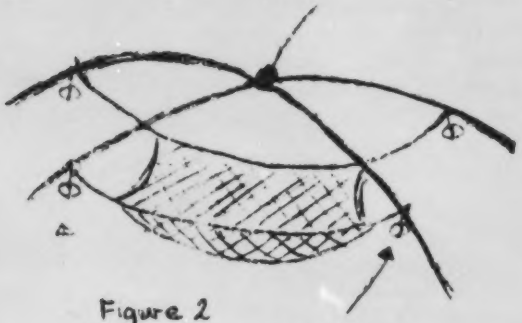


Figure 2
Stone Sinkers

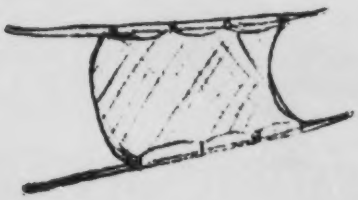
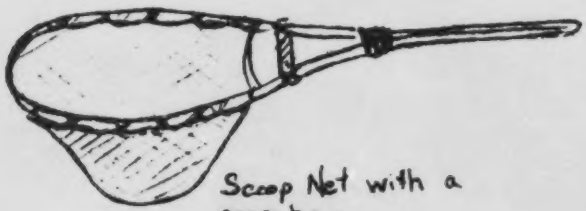


Figure 3
Simple dip net.

The names of nets depended on the type of fish to be caught. A pliable wooden rod was bent into an oval. Its ends met to form a handle. A fine meshed net was fastened to the wooden loop. Women used the net to catch a small rock fish named pāo'o at night and to catch 'ōpae. These nets were named 'upena pāo'o and 'upena 'ōpae.



Scoop Net with a cross bar

Scoop net without a crossbar

Bag Net

This type of net was made with a bag or enclosure into which fish were driven. Women and children helped to drive the fish into the large nets by splashing the water with their hands and feet.

Hola Method of Fishing

The Hawaiians also used plants to stupefy fish. The native plants produce narcotic juices. The fishermen pounded the twigs and bark of the plants listed below and placed them in tidal pools. The juices stupified the fish and caused them to float to the surface or die. The fish were gathered in baskets and taken home. Fish caught in this way were suitable for eating raw or cooked. The following are plants used for their narcotic quality:

'Auhuhu (Tephrosia purpurea), a slender, shrubby legume, one to two feet high, with small compound leaves, small white or purplish flowers, and narrow pods.

Ākia (Wikstroemia oahuensis), endemic shrubs and trees with small leaves, tiny yellowish flowers, and yellow to red, small, ovoid one-seeded fruits. The bark yields a fiber; the bark, roots, and leaves yield a narcotic.

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INSHORE FISHING, FISH TRAPS

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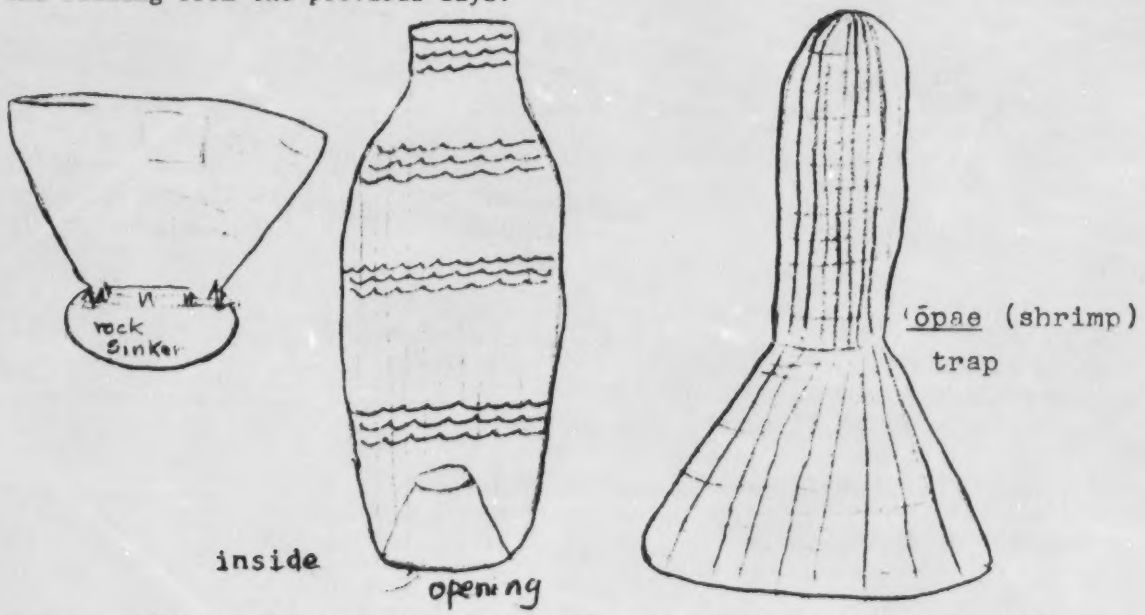
The ancient Hawaiians made fish traps or baskets and often set them among the reefs at low tide. These baskets varied in size and shape and were made from vines such as the 'ie'ie or the 'āwikiwiki. All baskets had a funnel at the top of it which extended into the trap for entry and an opening at the base of it for easy removal of the fish. The opening at the base of the basket was often concealed with a rock sinker or with sticks.

The Hawaiian word for basket was hina'i. Baskets used to catch certain fish were named for that type of fish. For example, hina'i ie palani meant basket used to catch a type of fish called palani. Some of the traps were shallow and circular while others were long and cylindrical or funnel shaped. The type of basket they used depended on the kind of fish to be caught.

These fish traps or baskets were baited with cooked sweet potato, cooked taro, cooked breadfruit, pounded crab, sea urchin, or 'ōpae. Once caught, the basket would be emptied by putting the fish into a gourd container. The basket would be returned to the water again. Some of the fish were also used as bait for fishing.

The Hawaiian men also used fish traps to catch fish in deep water from a canoe. They would use a basket similar to a trap by lowering it full of bait from the canoe and continue to do this for a period of about four to five days. At the end of this time, the men would substitute a real trap basket and lower it, full of bait, in the same way as before. In this way, he caught the fish that had become used to being fed from a basket and they were already fattened by the feeding from the previous days.



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NET-FISHING IN THE DEEP SEA

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Fishing was a constant and necessary occupation for the people of pre-Captain Cook Hawai'i. Everyone---men, women, and children whether royalty or commoner---knew how to obtain fish by various techniques because everyone got food from the sea through his own efforts. For some, it was just something that had to be done; for most, it was a pleasant duty; and for the ali'i, it was a favorite sport.

Net-fishing was the most productive and the most diversified method of obtaining fish. The people looked upon inshore net-fishing as the easy way in which a man could get enough fish for his family and his guests to share in their eating hale (house). Net-fishing in the deep sea was hard work but the excitment of the expedition and the reward of the harvest made it pleasant work for some.

Many kinds of net-fishing were done in the deep sea: some involved the patience, skill, and knowledge of the expert fisherman alone; a number required the help of one or more men in one, two, or more canoes; and others called for a whole fleet of different kinds of canoes, a wide assortment of supplies and equipment and a great number of people of varying skills.

Nets were made in a wide variety of sizes and shapes and a deep sea net fisherman had to have a collection of different kinds to do the fishing that he wanted to do in the deep sea. In fact, some kinds of deep-sea net-fishing called for so much gear that only chiefs and professional fishermen could engage in them. Nets were well-cared for, accumulated and handed down through the generations together with all other types of fishing equipment and knowledge. This was the custom of the times and a fisherman's occupational success depended upon his personal endeavors and ability to augment both the knowledge and the equipment of his inheritance.

"The people of old Hawai'i gave a suitable name to each thing---whether a person, a house, a pig, or a bird---according to the nature of the thing." (Kamakau, 6, p. 9). This tradition has created a bit of confusion insofar as nets and net-fishing are concerned for it is not always clear whether the names given apply to the nets used or the technique in which they were used.

All types of nets were used in the deep sea net-fishing but the seine nets, the bag nets, and the dip nets seem to have been of more importance to the deep sea net-fisherman than the hand and gill nets.

The expert fisherman achieved his status through a long process of diligent study of his craft and, though his work was strenuous, he performed it assiduously. He knew all the habits of all the varieties of fish in Hawaiian waters and he was careful to nurture and manage the numerous fish species--taking some for food while carefully allowing others to grow. He was awarded the reputation of being the master fisherman because it was he who knew when, where, and how to catch the elusive types of fish that others could not and it was he who organized and directed the catching of the large schools of fish that provided all with bountiful shares. At times, the fishing was for the recreation of his chief; at other times, he would fish to fill an order received from his chief; and between the two, he would fish for himself.

Fishermen shared their catch in accordance with the custom of the time. If the net-fishing operation was a small one--involving only the help of the fishing god, the fisherman's personal gods and the members of his immediate family--then the catch was distributed according to the needs of this group. If the operation was a large one, then all who participated in the expedition--including those who could not be present at the time of the distribution of the catch--would receive a share. Social rank determined the order of distribution and need determined the size of the portion.

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FISHING KAPU & RITUALS
THEIR RELATIONSHIP TO CONSERVATION PAST & PRESENT

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Being an island people, it was natural that the Hawaiians looked to the sea as a prime source of much of their food. H.L. Kelly (Kelly:9) says, "In my opinion, no people ever lived who had a more intimate knowledge of fish and their habits, and knew so well how to catch them as the Hawaiians..." They harvested several kinds of fish, octopus (he'e), seaweed (limu), shellfish ('opihi, pipipi, etc.), crustaceans ('a'ama crab, wana -sea urchin, lobster, etc.), turtle, and salt. Fishing was important and fish were extensively caught because of the few kinds and limited supply of other protein foods." (Bryan:14). The sea was a great reservoir of food for the Hawaiians...probably everything edible was consumed." (Titcomb:1).

Today, the people of Hawai'i still gather and purchase many of the same varieties of seafood. In many instanoes, the same methods of procuring the fish, seaweed, etc. are still followed. Some fishermen even follow many of the same rituals that were observed by the head fisherman and his apprentices.

Gods and Goddesses

Fishing was associated with religious ceremonies, or idolatrous worship. (Malo:208). Mary Kawena Pukui said, "Religion played a major part in the everyday life of our ancestors; in their farming, fishing, tapa-making, dancing, canoe building, sports and everything else. Each department of human endeavor had its special god or goddess from whom appeal had to be made by man for success in his undertaking." There were many gods of fishing. "The principal fishing god was Ku'ula, named after a great fisherman of ancient times. (Buck:286-287).

Fishing Shrines

There were also many fishing shrines (ko'a). The shrines were comprised of a pile of stones often located on "a promontory or elevation overlooking the sea. Coral or some sort of limestone was preferred to any other variety of stones." (Malo:212). Offerings of fish and even fishhooks were placed on the shrines. After "a successful fishing expedition, the fishermen made offerings of fish on their local altars (kuahu or lele). This ritual was almost always practiced as soon as the canoe landed on shore. Prayers were always said to the 'aumakua whenever a new net, new canoe, new fishhook was completed. The first thing made and consecrated, was never given away: it must be put by and guarded carefully, for it was given to the 'aumakua and held the mana (supernatural power) for that work for the person who made it. In the prayer used ... the 'aumakua were asked to increase or multiply the thing blessed." (Handy & Pukui:11). Some families today have their new homes and cars blessed as soon as the time is right, preferably soon after purchasing the items.

Although there were many different gods and many different rituals and kapu related to fishing, "they were all alike in the fact that they always worshipped before going forth to fish ..." (Malo:210). Some Japanese today still follow the custom of giving the first bowl of rice cooked everyday to their ancestors. Other foodstuff (such as fruits, candies, pastries, etc.) is also placed on the shrine first before the family partakes of the food. There is an interesting version of how the practice of offering fish to the fishing shrines originated in Margaret Titcomb's Native Use of Fish in Hawaii pp. 34-35.

In addition to these shrines, there were sometimes good-luck stones which probably stood for the god of the fisherman or an 'aumakua. "Sometimes they were carved with human delineaments, sometimes not. Sometimes they were brought along when fishing, sometimes left at home. When left at home the image was always placed facing the sea." Titcomb:40). In 1930, McAllister wrote, "Several ko'a (fishing shrines) were sacred to certain fish. One site was merely a stone at the edge of the water, but it had a great attraction for mullet.....it was at the Waikiki side of Diamond Head. Two others were at Waikiki itself , one named Huanui, for mullet, another, named Hina, for akule." The Mystery of the Ku'ula Rock is a series of true-to-life accounts as told by Joseph Keonona Chun Fat is based on the life and legends of the people living in the Kalapana area on the island of Hawai'i. (See Feher page 108 for a picture of one kind of fish god made of stone.)

Kapu and Customs

At the very heart of religious practices in fishing was the Kapu System. The "the articles made tabu by one god were different from those made tabu by another god." For example, If a fisherman's god forbid black, he would not wear any black to fishing." (Malo: 208). According to Mahealani Pescaia, her father still follows several of his ancestors fishing kapu. He will not wear red when going fishing.

The Hawaiians believed that fish had ears so they never spoke on the way to the fishing grounds. The fishermen were afraid that the fish would hear them talking and hide from them. Other practices were: never step on a net, line or hook. Although the women made the fishlines and fish nets, once the nets were completed and blessed, women were not allowed to handle them. Today, Japanese aku boat owners still do not like to have women on board their boats. They say it is bad luck and the catch will be small if women come aboard the boat. Still, in old Hawaii, a fisherman's wife was his staunchest supporter. She had helped to make the nets, she had prayed for his safe return. Therefore, before the canoes laden with fish reached the shore, the head fisherman sent a canoe ahead to deliver some fish to his wife. Women might be allowed to catch certain kinds of sea life near shore; but canoe fishing and several kinds of reef methods were restricted to men.

During the beginning of fishing seasons, there were many ceremonies performed. Offerings such as pig, coconut, and bananas were given; fires were restricted on one night, as were noises, the crowing of the rooster, the grunting of pigs, the barking of dogs. Prayers were offered and omens were sought. (Titcomb:43-44). Fish were used as offerings for such occasions as the building or launching of a canoe or dedication of a hula halau.

Conservation

Although seafood was plentiful, the Hawaiians realized the importance of conserving their supply of food from the sea. The Hawaiians were very adept, capable conservationists and many of the kapu related to fishing, as well as the Hawaiian fishponds, are examples of the foresight the Hawaiians had. Marion Kelly called Heeia Fishpond "a testament to Hawaiian fish-farming technology." Newman says, "Hawaiian exploitation patterns were apparently well adapted to tapping specific types of marine biota. Technology was carefully designed to meet specific conditions of the general Hawaiian marine ecosystem." Map 14 shows how both the land and sea were being used at the time of Captain Cook's arrival.

The old Hawaiians placed kapu on certain fishes to help in the conservation of the species. "The 'opelu and aku were two fishes that were depended upon for food to such an extent that they were almost sacred fishes. Both were protected by tabu during the spawning season, the open season for one covering the tabu season for the other." (Titcomb:42). David Malo describes the ceremony followed during the Makahiki season which lifted the kapu period on the aku fishing. (Malo: 152). Certain fish were kapu during the spawning season. "Some fish, such as the moi, were kapu to all save the chiefs." (Bryan:17). Today anyone may catch moi. There is a closed season on moi. However, the contemporary kapu on moi is that only 15 moi per person per day is allowed and the moi must be at least seven inches in total length. (Digest of Fishing Laws:5)

In specific areas, such as Hanauma Bay-O'ahu, Kealakēkua Bay-Hawai'i,"Āhihi-Kina'u Natural Area Reserve-Maui, Paikō Lagoon Wildlife Sanctuary-O'ahu, it is kapu to fish, take, possess, or remove any marine life within the waters of these areas. (Digest of Fishing Laws:11-13). Today it is extremely difficult to enforce the kapu. The Hawaiians were able to enforce the kapu most of the time because they strongly believed that the gods would be angered if they broke the kapu and that evil would befall the offender or some member of his family. There was also the other prospect of death if the kapu was broken.

Unless the people of Hawai'i observe some of the kapu and practices of their Hawaiian forefathers, they may someday lose the wealth and beauty of the sea through their own selfishnesss and carelessness...the sea is truly the living legacy left by ka po'e kāhiko (The people of old). The sea which once provided enough food to feed a population of 300,000 people...the sea which once supported an occupation held high in the esteem of the Hawaiian culture...the sea which surrounds our beautiful islands.

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FISHHOOKS OF ANCIENT HAWAI'I

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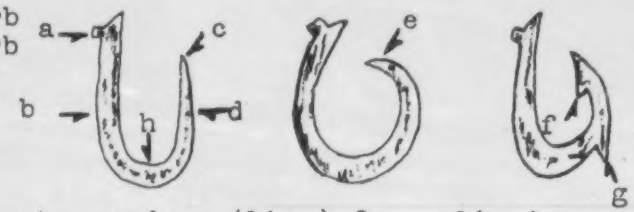
Fishhooks of ancient Hawai'i may be divided into two categories: simple fishhooks, made from one piece of material, and composite hooks, made of two pieces joined by lashing. Both types were made of shell, bone or ivory, or wood.

Simple Hook

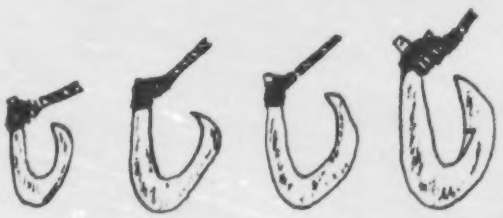
Fishhooks came in various sizes to suit the need. Here is the general shape of the simple hook with the necessary terminology.

a = shank knob
b = shank limb
c = point
d = point limb
e = incurved point
f = inner barb
g = outer barb
h = bend



The shank knob helps prevent the cordage (line) from slipping. The inner barb prevents easy extraction of the hook from the mouth of the fish. The outer barb, if placed high or medium high on the hook, acts in the same manner as the inner barb. However, if the outer barb is low on the hook, it probably served as a cleat for tying on the bait with a bait string (mali).

SHELL HOOKS Shell hooks were usually made of pearl shell (uhi), in small and medium sizes. The small shell hooks were termed "makau pāweo" and were used for catching 'ōpelu. These small hooks may range in length from 11 to 26 mm. and in width from 6 to 15 mm. Most of the shell hooks are in a subcircular form. Very few have the inner barb.



BONE HOOKS Small hooks made of human and dog bone resemble the small shell hooks in form. The majority of bone hooks found have the incurved point; however, some with a straight point were probably made and used with a line and rod, a form of fishing termed "paeaea."

A larger hook was made from human bone (makau iwi kanaka). The method used to shape a bone into a hook was to first cut the lengths of bone into rectangular pieces to correspond with the

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length and width of the proposed hook. The lower corners were rounded off to form the outer curve of the bend, and the edges were smoothed off with coral rasps. A hole was then drilled to form the inner edge of the bend. Then the inner hole was enlarged and shaped with small coral rasps or files. The hook took shape with a lower curved bend connecting two limbs. The upper ends of the two limbs were then shaped, one for the cord attachment of the line and the other to form the functioning point.

Hawaiians believed that fishhooks made from the bones of people without hair on their bodies, who were termed " 'ōlohe," were more attractive to fish than hooks from normal bones. Thus the " 'ōlohe" individuals ran the risk of being prematurely killed to supply the luck-bringing material. (Buck, Peter, Arts and Crafts of Hawaii)

The bone hooks may range from 38 to 45 mm. in length and 17 to 20 mm. in width.

A still larger type of hook, more circular in form, was made of whale ivory (palaoa) and, less frequently, of human bone. The ivory hooks were called "makau palaoa" (which is descriptive of the material used.) These hooks may range in length from 38 to 59 mm. and in width from 27 to 34 mm.

Very large hooks were made of whale bone. One which was found is 147 mm. long and 69 mm. wide with a thickness of 8 mm.

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WOOD Wood was not used like shell or bone as material for small one piece hooks; but extremely rare hooks, such as composite shark hooks, were made of wood.

Composite Hooks

BONE Two-piece bone hooks (small, medium, and large) are all similarly constructed. With few exceptions, the points do not curve inward like the incurved points of the simple hooks.

COMPOSITE BONITO HOOK The bonito hook was termed "pā uhi," after the pearl shell (uhi) of which the shank was made or "pā hī aku" after its use in trolling (hī) for bonito (aku).

The hooks consist of a pearl-shell shank and a point, which is usually made of bone but rarely of the pearl shell or turtle shell.

Bonito hook shanks, also termed "pā" or "uhi", were formed from segments of the thick hinge (pu'u) and shell of the pearl oyster. Some local shells were so small that the lengths of the shanks varied considerably.

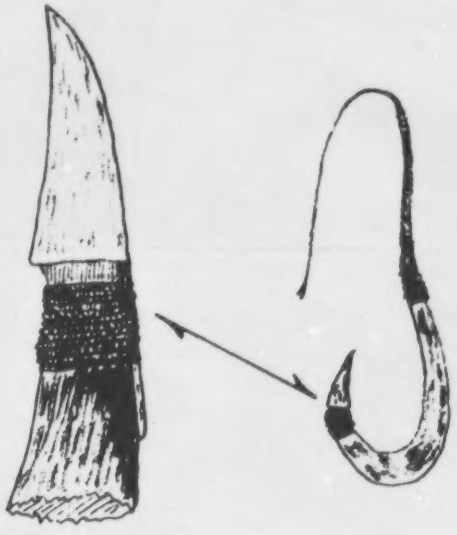
The back of the shank (which is the outside of the pearl oyster shell) is naturally covered with a thick, dull layer. This is ground off to expose the iridescent color of the shell beneath. Shell colors are variations of yellow, red, black, and white. These hues were the selection basis of the various bonito hook usage for trolling under differing light conditions.

The bone point of the hook curves upward and forward. The length and curve of the points vary a great deal. Near the base of the point, a hole was drilled. This hole and the head hole, a little above the front surface of the shank, enable the Hawaiians to lash the shank and the point together to form the bonito hook.

SHARK HOOKS The shark hooks (makau manō) are the largest of the local fishhooks. The majority of the shark hooks are composite hooks of wood with bone points. The shark hooks were made of hard wood such as uhiuhi, walaʻeʻe, koaiʻe, and ʻāweoweo.

The bone points of the shark hooks are shaped to a true point. Its shape is triangular with a lower tang which fits into a deep groove cut into the outer side of the upper end of the point limb.

The shark hooks may range in length from 7 to 11 inches and in width from 3 to 5.5 inches.



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ADDITION TO FISHHOOKS
by Dorothy Hazama

Besides their functional value, fishhooks have recently assumed additional importance because our foremost archeologists- Emory, Sinoto, and Bonk- have proposed that the fishhook "offers, in the absence of pottery, the most promising means of tracing the ancient culture through artifacts." (p. ix)

Kenneth Emory, William Bonk, & Yoshihiko Sinoto. Fishhooks. Bishop Museum Press, 1959.

THE HAWAIIAN FISHPOND

by Yolanda Mikihala Hall
Institute for Hawaiian Culture Studies

Fishponds played an important part in the lives of the ancient Hawaiians. Though they were skilled fishermen, there were certain times when the various laws and events of nature regulated the fishing industry to the point where the practice of aquaculture became necessary. Whether the concept of fishponds evolved out of this necessity or whether it was a practice brought by the Hawaiians at the time of their arrival to the islands, is unknown. The fact remains that the Hawaiians, unlike the other Polynesians, developed the use of the fishponds to a great extent.

A recent study undertaken by Apple and Kikuchi discloses the existence of at least five general types of ancient Hawaiian fishponds: loko kuapā, loko pu'uone, lokowai, loko i'a kalo and loko 'ume 'iki. Loko is the general Hawaiian term for an enclosed body of water. The loko kuapā was a pond enclosed by a man-made seawall. The loko pu'uone was a shore pond enclosed by a natural or man-made sandbar. The loko wai was a pond set inland and connected to the ocean, river or mountain stream by man-made ditches. These three types, along with other more productive ones were owned by the high chief of the land and were considered to be royal ponds. The loko i'a kalo was an ingenious method of cultivating fishes in the taro patches thereby producing not only taro but fishes and shrimp as well. The loko 'ume 'iki was a network of stone flanked lanes. Fishes coming in with the tide swim up and are trapped at the end by nets. Unless it was the sole possession of the ruling chief, the loko i'a kalo and loko 'ume 'iki were probably operated by the lesser chiefs or commoners, though the harvesting of the fishes was never independent of the ruling chief's rights.

The construction of one of these ponds was an engineering feat which required the assistance of many skilled laborers who probably worked under the direction of a kahuna. Before a project of this nature was undertaken, selection of a site was necessary along with the aquisition of the proper raw materials which included: stone, coral, lithified sand, alluvium, timber and vegetable materials. Since there is no written record as to the exact role of religion in the construction of a fishpond, it might be assumed that because every aspect of Hawaiian life involved consultation with their gods, building a fishpond must not have been any different.

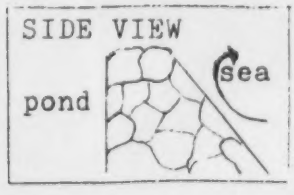
Once a site was chosen and the materials gathered, construction of the wall began by placing heavy rocks in such a manner as to fortify it against the waves and currents of the ocean. This meant that the wall facing the pond was built vertically, while the wall facing the sea was angled. (see fig. 1) Thus the wall, when built properly with rocks, smaller pebbles, alluvium and sand, kept the fishes in and the rough ocean waters out.

The entire pond was enclosed by a wall except for one or more open areas where a stationary gate was placed. This gate is said to have been the most ingenious invention utilized in the Hawaiian fishpond. Made of hardwood and bound together by various types of cordage, this sluice grate or mākāhā, when in place allowed the water from the ocean to run freely through while it kept the fishes from escaping. When this was completed, the cultivator of the fishpond or kia'i loko, like a farmer preparing his field, prepared his pond by acquiring some rocks with seaweed or limu and transplanting them in his pond. He would also allow the phytoplankton and other algae to grow in order to provide the fish with food.

When he saw that his "field" was ready, the kia'i loko went out into the ocean and gathered the "seeds" or very young fish using finely meshed nets. Bringing them back he "plants" them in the pond where they will grow big. Usually, the types of fish selected for the pond were those preferred by the ruling chief of the land. During the growth of the fish, the cultivator had to tend to his field, preventing it from being overcrowded with algae or the muck of the fishes own excretions. Methods of "cleaning or weeding" his field included: scooping out the debris at the top of the water with a net, dragging a weighted-down bamboo rake from a canoe during the high tides in order to flush out the muck at the bottom, or by calling in the commoners to manually clean it out. Along with this the kia'i loko had to also "weed" out predatory animals of the sea like the barracuda (kākū) and the eel (pūhi) who entered through the sluice grate when they were small and who had grown to be considered dangerous.

Dangerous to the pond, too, were the poachers like the pigs, dogs and man. To prevent anything from happening, the kia'i loko had a guard house (hale kia'i) built on the wall of the fishpond near the mākāhā in order to ward off intruders.

When it was time to "harvest" his crop, the kia'i loko would use one of the methods to do so. He may use a spear, a hook, a scoop net, or splash the water with his hands, frightening the fish into a net or he may simply wait until they gather at the mākāhā for the scent of the fresh ocean water drives them back to the ocean. Once harvested, the process of cultivating the fish would begin again. Thus the Hawaiians developed a way of life which would ensure fresh fish and other aquatic life, all year long.



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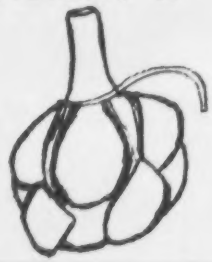
Gourd Water Containers - HUE WAI

by: Phyllis Anbe
Instutite for Hawaiian Culture Studies

Water gourd containers (hue wai) had a richer variety of forms in Hawai'i than elsewhere in the Pacific as a result of the varieties which were developed through excessive planting to provide poi bowls. There are three main forms of water containers: 1) the normal globular shape with variations in the shape of the neck, 2) the hourglass form (hue wai pueo) with two globular parts separated by a constriction, and 3) a long cylindrical form ('olo wai). As the two forms acquired distinguishing names, the general name of hue wai usually referred to the globular form.

Some variations to the globular shape were produced artificially through manipulation when the fruit was green. One gourd found in Forbes Cave, Hawai'i retains the hāwele coir around which the growing gourd bulged through to produce a series of globular protrusions.



A mature gourd was made into a water bottle by cutting out the stalk to form a small circular hole at the top. A few with curved necks had the hole cut in the side of the necks. Water was poured in and left to help rot the flesh. After the rotted flesh and seeds were shaken out, small pebbles and some water were added. By continually shaking the gourd the friction of the pebbles smoothed the inner surface of the rind. When clean, the gourd was fitted with a shell or wooden stopper and frequently enclosed in a coir support for carrying and hanging. Some gourds were decorated with the pāwehe decoration used on bowls. They were filled with coconut shell or gourd funnels (kānuku).

Of the globular form gourds there are some with conical necks and those with tubular necks.

Conical Necks

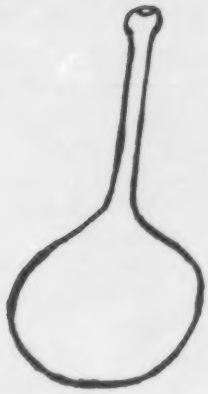
Side hole in neck.
d. 8.75" h. 12.5"

Hole in top with simple coir support.
d. 8" h. 9.5"

Tubular Necks

Short neck.
d. 7.75" h. 7"
neck length 1"

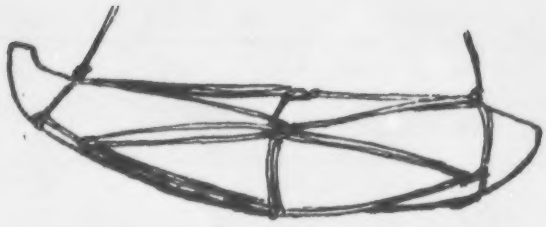
Medium neck.
d. 9.75" h. 12"
neck length 4"



Long neck.
d. 10" h. 20"
neck length 10.75"

Hourglass Form

Cylindrical Form



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HOW WATER WAS STORED
by Jane Shirafuji
Institute for Hawaiian Culture Studies

Water was a necessity for the survival of the early Hawaiians. It was needed for drinking at meal time as well as at other times. Water was the chief drink of the Hawaiians. The people went to various places to get their drinking water. These places were often a distance from their dwelling. It was important for them to devise a way to store their water supply.

Where were these places where drinking water was in abundance? There were many springs in the islands, some in the lowlands and some along the shore covered by the ocean. The water from these springs along the shore was perfectly good, though not as fresh as the water from other springs. Streams of fresh water provided another way of getting water. (Malo: 101)

To get water, the Hawaiians took a covered gourd (hue wai) located the mouth of the spring, uncovered the gourd just at the mouth of the spring, filled it, and covered it.

No matter where the source of water was it was necessary to obtain water and keep a quantity at home. Some water gourds were provided with single suspension loops so that gourds could be carried on poles ('auamo)or suspended from the horizontal support erected in the houses or outside on the house platforms. (Buck: 60)

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HOHOA-ROUNDED KAPA BEATER

by Haroldeen Wakida
Institute in Hawaiian Culture Studies

The hohoa (hoahoa) was used in the preliminary stage of beating out individual strips of bast. It was somewhat club-shaped and ranges in length between 14 and 15 inches. Hohoa means rapid beating.

The beating part, or blade was quite smooth in some beaters; in others it was grooved to form sharp parallel ridges which ranged from eight ridges to the inch to 14 ridges to the inch. The beaters with panels of smooth, coarse and fine ridges could be used in three steps of the first stage of beating: coarse ridges first, fine ridges second, and the smooth surface to finish off.

In the first beating stage, the soaked fibers were pounded with the hohoa on a large smooth stone anvil. In the second beating stage the four-sided beater was used on a flat topped wooden anvil.

The hohoa was made of hard wood-koai'a being the wood used in most of the Bishop Museum specimens. Other woods were nioi, uhiuhi, lehua kauila, and o'a.

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HOHOA KAPA BEATERS

I'E KUKU-FOUR-SIDED KAPA DESIGN BEATERS

by Haroldeen Wakida
Institute for Hawaiian Culture Studies

I'e kuku- the second type of kapa beater which was used in the second process of beating, had a quadrangular blade with four surfaces of equal width. The average length of the blade was 7 to 8 inches, the entire beater averaging 14 to 15 inches.

The four surfaces were each carved with a different design. A surface left perfectly smooth was used at the end of the beating to smooth out the cloth.

The Hawaiian beaters had patterns which required expert skill. They were made by men who used a straight-edged length of bamboo as a ruler and shark tooth carving implement. Women obtained their beaters from these experts, and there was keen competition to produce a variety of designs. The introduction of metal further stimulated the production of the many designs and combinations which exceed any kapa designs made elsewhere.

Some kapa were decorated with watermarks. A watermark is a design that shows clearly when the material is held up to the light. It was made by impressing the beater on the kapa. It was put on very carefully so that the mark of each pressing was right next to the last one. It looks like an all-over design. It is thought that watermarking became a popular practice as the result of the introduction of metal.

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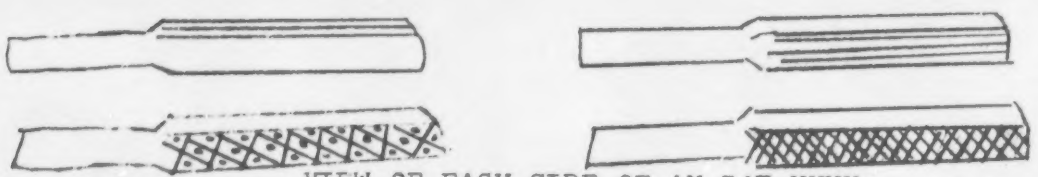

VIEW OF EACH SIDE OF AN I'E KUKU

KĀHUNA

by Laura Fujiwara
Institute For Hawaiian Studies

Kāhuna were expert craftsmen or masters in various professions. They were also experts at performing the religious ceremonies that were related to their profession or craft. In some professions, like medicine, kāhuna specialized in various aspects of the same profession. Every profession and craft had its own patron gods and kāhuna who were feared for their knowledge and power and deeply respected for their skills as craftsmen. When called upon, the kahuna would make offerings to the god and pray for his blessings. The success of any undertaking depended on the perfection of the ceremonies that were conducted by the kahuna.

The kāhuna were responsible for maintaining the religious system and apprentices were carefully chosen and trained. The training process was a secret and success depended on strictly following the rules of the priesthood until the end of the training period. Training periods lasted for a long time. For instance, a medical kahuna would train for approximately twenty years. Imperfection in conducting ceremonies and offerings usually resulted in dismissal at the end of the training period.

There were many types of kāhuna and each performed his specific duties. However, the kahuna nui or high priest, was the most powerful for he held the knowledge of all the other types of kāhuna. He could be called upon for advice by other kāhuna if they felt that their powers were not strong enough to handle a problem. The kahuna nui was an advisor to the king and was consulted in all matters of importance. E.g., proper time to wage war, advice on religious questions, etc. Some types of kāhuna were:

1. Kahuna'anā'anā - feared the most because he practiced black magic such as praying a person to death.
2. Kahuna pale - counter sorcerer who would try to save the victim of a curse by saying a counter prayer.
3. Kahuna kuni - if the victim died this kahuna would take revenge for the family by conducting the rituals to determine if a person really had been prayed to death, identify the sorcerer and counteract the spell by sending the evil back to the sorcerer thus killing him.
4. Kahuna kālai wa'a - performed canoe building ceremonies.
5. Kahuna lapa'au - practiced medicine, had great knowledge of herbs and their usage.
6. Kahuna kuhikuhi pu'uone - selected the site and planned the building of heiau.
7. Kahuna pule - dedicated new homes.
8. Kahuna kilokilo - foretold the coming of good or bad events by observing the skies.

9. Kahuna ho'oūlu'ai - agricultural expert.
10. Kahuna kālai - carving expert, sculptor.
11. Kahuna ki'i - caretaker of images, who wrapped, oiled and stored them and carried them into battle ahead of the chief.

Many times children think of kāhuna as evil sorcerers who could be asked to do terrible things. The following stories can be read to help children better understand the definition of the word kahuna. They will see that many kāhuna were not evil but rather highly respected craftsmen as well as priests who performed rituals. Besides these stories many legends also mention kāhuna.

1. Life In Old Hawai'i by Caroline Curtis
   A. "House Building" pp. 1-20 (References made to kahuna concerning the building of a hale.)
   B. "Canoe Making" pp. 135-156 (Linohau is an expert canoe maker, a kahuna.)
   C. "Makahiki" pp. 157-186 (Kahuna's duties during the Makahiki, ceremonies.)
   D. "Hiwa" pp. 238-243 (Kahuna's blessing of a new born child.)
   E. "Funny Child" pp. 244-255 (Kahuna Lapa'au.)

2. The Ancient Hawaiians - Who Were They? How Did They Live? by Dorothy Hazama
   A. Page 31 - Kahuna for house building.
   B. Page 42 - Kahuna to perform dedication ceremony.

3. Manu a Girl Of Old Hawai'i by Caroline Curtis
   A. "Upland Sports" pp. 36-39 (Kahuna lapa'au)
   B. "Can You Cure Blindness?" pp. 59-60 (Kahuna lapa'au)
   C. "Lono's Return" pp. 61-63 (Kahuna lapa'au)

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KAPA STAMPS

by Haroldeen Wakida
Institute in Hawaiian Culture Studies

Kapa stamps of bamboo were the most popular markers used as a form of block printing on kapa. The stamps were termed 'ohe kapala ('ohe, bamboo; kapala, to stamp). The Bishop Museum collection contains 262 bamboo stamps. The Honolulu Academy of Arts also has some in its collection.

The average thickness of the bamboo strips is 0.2-0.1 inches. The length ranges from 11 to 19 inches. The end of the handle sometimes includes the thick part formed by a node, affording a better grip. An occasional stamp has a piece of kapa wrapped around the end of the handle to improve the grip.

Bamboo stamps were kept in a container formed of a length of bamboo with a node closing the bottom end. The open end has a cord loop for hanging or carrying.

The inner, dull surface at one end of the bamboo strip was carved by means of a shark tooth mounted on a wooden handle. By cutting parallel grooves and triangular notches, a large number of geometric motifs and combinations were produced in a variety of difference patterns. It was probably the ease with which strips could be carved that led the craftsmen to try out so many variations.

A favorite pattern was of parallel chevrons, either close together or spaced in sets of twos, threes, fours or fives. A different effect is produced by sets of opposing chevrons, and double rows of parallel chevrons.

The carved end of the stamp was dipped into a container of liquid dye, then the excess was removed by tapping the stamp against the rim of the dye bowl. The end bearing the film of dye was pressed against the kapa. The woman probably held the stamp in her right hand and pressed its end down on the cloth with her left hand so as to make a clear impression. She dipped the stamp again in the dye and laid it against the side of the first impression, taking care that the second impression should be exactly against the side edge of the first. This unique and highly effective method of designing kapa was confined to Hawai'i.

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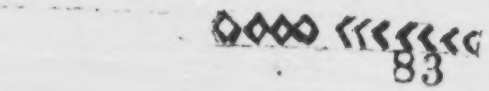
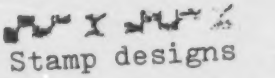


Bamboo stamp



Stamp designs

THE MAKAHIKI

by
Ruth Miyashiro
Institute for Hawaiian Studies

The makahiki was a great celebration in ancient Hawai'i. During this period, the people were compelled by law to leave their ordinary work and religious observances. A period of four consecutive months, approximately mid-October through mid-February were dedicated to this festival which was held in honor of the god Lono. Lono was the god of peace. Two prayers offered to Lono during the makahiki also describe him as the god of rain and cultivated food. Rain was so essential to their life that they had to pray for it, and they prayed to Lono whom they saw in the clouds. During the makahiki, war was kapu. In Hawai'i, warfare was conducted in a feudalistic manner controlled by rules, formalities, prayers, and much ceremony. Thus, battles could be suspended for this purpose.

The first part of the makahiki festival was the period of religious ceremonies to god Lono. The image of Lono (the makahiki idol) was carried around the island by the priests. At each one of the ahupua'a, the chief of that district presented the gifts to the image of Lono. Taxes had to be paid in foods, kapa, mats, and feathers. Offerings of pigs, dogs, fowl, poi, tapa cloth, fishnets, fishlines, feathers, finely designed mats, and adzes were placed on the altars of Lono. The altar was erected at the boundary line of each district. A small image of a pig was also placed on this altar. If the tribute presented was too little, the attendant chiefs of the god would complain and would not furl up the god nor twist up the emblems and lay him down. The attendant kept the god upright and ordered the ahupua'a to be plundered. Only when the keepers were satisfied with the tribute given did they stop this plundering in the name of the god.

The makahiki idol carried by the priests was a 10 - 12 foot long wooden pole. It was a figure carved at its upper end. A 4 - 6 foot cross piece was tied to the neck of this figure. Pala fern, feather lei, two or more skins of the booby bird, and white kapa decorated the image. (see illustration) This image of the god Lono was carried from district to district until the whole country was free from kapu. Then the image was returned into the heiau and was not seen again until the next makahiki circuit. The people were now free to enjoy the feasting, dancing, and competitive sports.

The makahiki games provided the people with the necessary relaxation from the rigors of their daily lives and helped to develop and maintain their physical prowess. A great variety of sports and games was enjoyed by the Hawaiians. While these amusements could be indulged in all through the year, the makahiki was the great festival time when regular work was put aside. After the annual taxes had been paid, many sport tournaments were held and both the chiefs and the commoners enjoyed them together. It would not be necessary to list the games here since several good accounts of Hawaiian sports and games are available. Dr. Donald K. Mitchell, in his book Hawaiian Games for Today, describes sixty Hawaiian games with directions for playing thirty of them. The accompanying photographs are most helpful.

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MAKAHIKI IDOL and BANNER

One type
from Malo, p. 144
See also Webber's drawing
in Feher 112, 111, and 137

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MARRIAGE IN OLD HAWAI'I

by Amelia Ouye and Elsie Suyenaga
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Marriage ceremonies in old Hawai'i were more informal than they are today. Generally, marriages were monogamous among the maka'āinana or commoners and polygamous among the ali'i or chiefs and families of wealth. "Polygamy was not frowned upon if the first wife had no objections and very often it was the wife or the husband who would suggest it. A wife might say to her husband, "I love my cousin so much that I do not want her to go away, so you take her for your wife," and to the cousin she might say, "Let him be our husband. The children of one were the children of the other." (Handy and Pukui: 109) However, most marriages were monogamous.

Though the 'ohana or family gave a boy or girl plenty of advice concerning the practical characteristics most desirable in a husband or wife, neither the boy or girl was forced to marry against his or her wishes, except perhaps in certain rare instances. Love songs with hidden meaning, the nose flute and musical bow, and subtle language or glance and gesture were used to attract the attentions and carry the message of sentiment and passion to the one you loved and wooed in courtship.

There were no formal engagements or marriage ceremonies among the commoners. "When a boy saw a girl he wanted for his wife, he spoke of it to his parents or grandparents. Then his people went to see the girl's parents. If it was agreeable to the elders and if the girl agreed, the young man simply came to her home to live with her, becoming one of the family. Hawaiians preferred girl children because the girl remained with her people while a boy went to his wife's parents' home." (Handy and Pukui: 106-107) There was no feast or celebration as was the custom among the families of rank and wealth.

Engagements were characteristic of the families of rank and wealth. The engagement was marked by the exchange of gifts between the families of the boy and girl. To break the engagement was a serious offense. "The relatives of both sides made fine mats, tapas, and tapas, and whatever else was needed for the new household. The relatives of the boy gathered the material together for the new house and the relatives of the girl assisted in building it. Neither side wished it said that their child came from an 'ohana puhikole (destitute 'ohana) and so they saw to it that their son or daughter was well provided for when the la ho'ao or wedding day came. When the house had been made ready, the young couple were taken into it. The kahuna prayed that the union be fruitful. If the wedded pair were chiefs, the people came with their ho'okupu (gifts)--food, mats, tapas, canoes, everything that they had to give. The marriage house was kapu, only for the bride and groom, where they could have privacy and be by themselves if they chose. The 'ohana had their feast out of doors or in a shed built for the purpose where they ate and enjoyed themselves."(Handy and Pukui: 106)

The marriage between a brother and sister or half-brother and half-sister in order to intensify mana for their heirs was permitted only among the high ranking ali'i. Among the commoners, very close intermarriage among family members was discouraged. Marriage between cousins was permitted.

An unhappy marriage would be broken very easily by the couple going their separate ways and refusing to live together as husband and wife. Marriages for the most part were permanent and the affection of the kāne and wahine for each other was very deep.

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Prior to 1820, the Hawaiian marriage customs were quite informal. With the coming of the missionaries, Christian marriage became an important part for the Hawaiians.

In 1827, marriage was not valid unless a Christian minister solemnized it. Offenders were punished by working on public roads.

By 1829, monogamy became a law. Anyone with more than one wife or husband was guilty by this law and had to choose one spouse and discard the rest.

If two married people lived unhappily together, quarreled often and disregarded their vows of marraige, they were brought to trial and confined in irons on nights and released by day, only until they ceased to quarrel.

If adultery was committed and the adulterer caught, he paid three hogs to the husband of the adulteress, three hogs to the Governor, and a portion for the King. If not hogs, something of equal value had to be substituted. If it were a woman, she paid five dollars to the King, five dollars to the Governor, and five dollars to the wife of the man. After four connections, the King decided whether to take their land away from them.

In 1835, Governor of Maui, Hoa'pili, denied marriage licenses to the illiterate, to combat illiteracy. Kamehameha III signed an act to ban marriages to anyone unable to read or write. (Greer: 241)

In 1860 Kamehameha IV signed an Act to regulate names. A married woman should take the name of her husband. Children were to take their father's name and all illegitimate children should take the name of their mother's maiden name.

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NET CONTAINERS - KŌKŌ

by Myrna Nishihara
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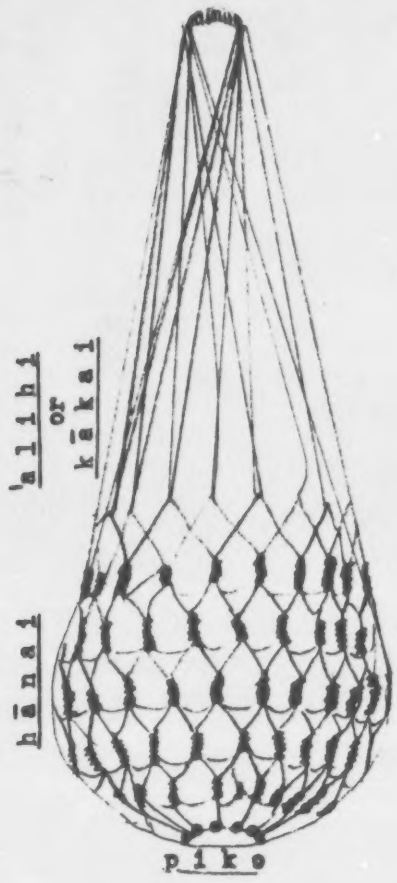
CHIEF'S KŌKŌ



Kōkō were the carrying net containers made of 'olona, sennit (coconut fiber twine) and other strong fiber. They were corded and netted bags in which were placed wooden or gourd bowls containing food or clothing. These nets and contents were placed on carrying poles ('auamo) for transporting. Sometimes, the kōkō with its contents was left suspended from a wooden hook attached to the ridgepole of the hut or placed on the top of a pole set in the ground to protect the food contents from animals. Sometimes a smaller net without an inner container was made to carry sweet potato, taro and other edibles.

Oftentimes the commoners brought great numbers of kōkō to the ali'i in payment of taxes. The king would select the best, the remainder was sometimes returned to the commoner.

There are two types of kōkō: 1) the plain netted bag used by the commoners and 2) the one used by the chiefs.

The chiefs' carriers often had large callouses on the shoulder caused by the carrying poles. The ali'i and only the ali'i could use these kōkō pu'upu'u. The punishment for use by anyone other than an ali'i was death. However, commoners did risk carrying personal things in them for protection against robbery. With an ordinary kōkō, the commoner was often victim to robbers, but a chief's kōkō pu'upu'u meant that the commoner was serving his chief and thus his property was safe -- unless discovered.

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'OHANA: THE EXTENDED FAMILY SYSTEM OF ANCIENT HAWAI'I

by
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'Ohana is a derivation of the word 'ohā, which is an offshoot of a taro plant. The taro, kalo, was considered the most sacred symbol of life to the ancient Hawaiians as well as their all-important staple food. 'Ohana therefore became the offshoots of the family.

The 'ohana was composed of not only the so-called typical family of father, mother, and children, but also included blood relatives, relatives by marriage and adoption, and friends. The families were made up of several generations. One or more families made up a household or kauhale.

The households were grouped in small clusters along the seashore, in the valleys, on the plains and on to the uplands and mountains. This community or social organization of relatives and friends ranged from the mountains to the sea.

Working together cooperatively (laulima - "many hands") was a most important part of everyday living and permeated the entire lifestyle of the ancient Hawaiians. Some work was often a shared responsibility when everyone worked and helped (kōkua - "helped") as a team to accomplish the task at hand. Other types of work could be done by individual efforts.

Sharing of goods and services were also part of everyday living. The 'ohana of the plains and uplands raised taro and banana, wauke to make kapa, 'olonā to make cordage; and took these products as gifts to the 'ohana living along the seashore. The 'ohana of the plains and uplands received fish, lobster, seaweed and salt as gifts from the 'ohana of the seashore.

Children were an important part of the 'ohana. Generally all of the adults within the 'ohana as well as a child's immediate family were concerned with and felt responsible for the upbringing and education of the child. A child could go to any adult within the 'ohana for attention and affection; but most important, the adults were consistent in their dealings with the child. Discipline was also a very important part of the upbringing and education of the child.

The kūpuna (grandparents and relatives of the grandparents' generation) were largely responsible for the education of the children. Girls and boys learned the history, genealogy, family chants, and crafts. Skills in the production and use of tools, weapons, and other implements of work and play were nurtured; appropriate behavior was learned; the many kapu necessary for living a law-abiding life were memorized and practiced. Sex education was also learned at an early age.

Youngsters also learned by working side by side with their parents who did the major work of fishing and producing food and clothing. They were expected to learn by observing carefully and then practicing what they learned.

Children learned from an early age to become productive and useful members of the 'ohana. One source cites the age of two years when a child could carry a gourd of water, as the beginning of contributing to the work. Boys weaned from mothers at age 5 were taken into the men's eating house where they learned from the adult men. Older children also helped to take care of their younger siblings.

The elder male of the senior branch of the 'ohana presided as the leader of the 'ohana. The advice and opinions of the 'ohana members were important in helping him with his duties. Because the ancient Hawaiians were competitive individually and collectively, it was important to clearly define the rules and set up the guidelines. The leader presided over the councils, supervised work, workship, and other community activities; supervised the division of a catch of fish or a harvest of a crop among those who helped.

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Interviews:
1. Dr. Donald Mitchell, Kamehameha Schools
2. Annabelle Kane, descendant of King Lunalilo, who grew up in 'ohana system and whose parents practiced Ho'oponopono

Study Notes - by Marion Kelly
for ED CI 586, April 1976.

The 'ō'ō

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The 'ō'ō used by the ancient Hawaiians was "almost the only agricultural implement. Stick or small tree, six to nine feet long, two inches or more in diameter, sharpened at one end and flattened at the other. Some had a bend against which the foot could be placed to help force it into the ground. Hole enlarged by moving back and forth. Kaua'i specimen shorter, flattened spatulate digging stick similar to those of New Zealand. May have been used for digging sweet potatoes."[1]

"The 'ō'ō (shaped like a whale-spade) was an instrument useful in husbandry. It was made of the wood of the 'ūlei, mamane, ʻōmolemole, lapalapa, (and numerous other woods, including the alahe'e.)".[2]

The planting of the slips began with the first row, which was laid out very straight with fishline or rope. After the line had been stretched the men stood on either side of it. They stood along the width of the field with their backs to it and began digging. Their arms moving in unison, all thrust their 'ō'ō down in front of them. They thrust once, twice, and at the third thrust, the blade of the 'ō'ō entered deep into the soil. The 'ō'ō was bent back, turning up the moist soil below; a foot was pressed on the soil that stuck to the 'ō'ō to remove it and to break it up, and the the 'ō'ō was lifted. Women followed with the slips, dropping two into each planting hole, and other women placed them side by side and packed the earth down around them with their feet. A proud sight it was to see (he mahi'ai ha'aheo keia) as the 'ō'ō kū rose, fell, and were bent back all in perfect unison, the men's arms rising together as though beckoning. Only a single late afternoon was required to plant a field of five acres or more."[4]

Thus did the 'ō'ō or simple digging stick play a most important role in the life of the ancient Hawaiians.

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HAWAIIAN PETROGLYPHS

by
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The word petroglyph is derived from the Greek roots, petros-stone and glyphe-carving. In Hawaiian, petroglyphs are called ki'i pōhaku or images on stone. Petroglyphs found in Europe, North and South America and the Pacific Basin have basic similarities, but each culture developed its own distinctive styles of depicting images.

The Hawaiians became the most prolific petroglyph artists in Polynesia. Their work is found on all the islands. Authorities believe the island of Hawai'i may have the largest petroglyph fields with the greatest variety of forms and styles, the most dense concentrations, and some of the oldest and newest petroglyphs in the world.

Mystery has long surrounded their origins. It is difficult not to wonder --When were they made? How were they made? Where were they made? Who made them and why?

When were they made?

The dating of Hawai'i's petroglyphs is highly speculative. Authorities believe that the original Polynesian voyagers brought the practice of petroglyph making with them when they first settled the islands some 1200 years ago. The forms developed here are unique to Hawai'i and not found elsewhere in Polynesia. For example, these are muscled figures as opposed to simple stick figures which are universal.

The line or stick figures are the simplest and apparently the oldest. The triangular bodied figures are more complex, hence younger, and the realistic muscled figures are the most recent. Line or stick figures seem the most common, triangular figures less numerous, and muscled figures seem relatively rare. It seems that the apparent decline in number of petroglyphs made indicated an increasing lack of interest in making rock carvings.

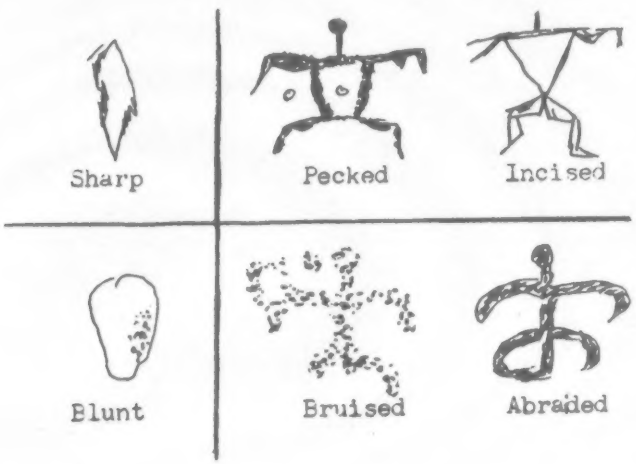
While most petroglyphs are believed to have been produced in prehistoric times - that is, before Captain James Cook re-discovered the islands in 1778 - the objects brought by the newcomers found their way into the islands' stone art. Later petroglyphs show goats and horses, introduced in Hawai'i around 1800, sailing ships, churches, guns, letters, and dates. The close of the 1860's marked the end of petroglyph activity, as life style in the islands changed. The old foot trails were no longer used, new rituals replaced the traditional ones, and a written language replaced the symbolic stories in stone.

Evolution of Petroglyphs (4:32)

How were they made?

Petroglyphs were made in different ways depending on the hardness of the rock surface to be worked upon, the kind of tool used, and the manner of applying the tool to the surface. Stone was the common material for cutting and hammering. The working end of the tool was either blunt or sharply pointed, or less frequently knife-edged. A sharp chunk of compact basalt or a broken adze or chisel would make a useful tool. Any stone of sufficient hardness could have been used for a blunt pounder. They were simple but effective. Petroglyphs made after the 1800's could have been made with iron tools. The sharp-edged designs of some of the lettering, dates, ships and guns indicates the use of iron.

Tools and Techniques (2:38)



Where were they made?

Hawaiian petroglyphs are usually found in groups rather than single isolated units. Certain areas may have become favored places for the making of petroglyphs merely by custom, accident, and convenience. Some sites are near the shore. Others occur along known trails. Some are near ancient land boundaries while other sites are at what might have been rest areas where some shelter is available - caves or overhangs.

They were made on five surface types: pāhoehoe lava fields, waterworn boulders, cave walls, cliff faces, and sandstone beach shelves.

Who made them and why?

The precise meanings of petroglyphs are not clear. Many appear to depict animals, tools, weapons, and sailing vessels known to the natives before and

after the arrival of Captain Cook. Some are related to traditional rites, a concern for insuring long life and personal well being, the commemoration of events and legends and recording of trips and communication concerning other events. Others seem to be symbols relating to birth, children and families.

Petroglyph forms including human figures, elaborations of holes, dots, circles and lines are probably concerned with birth and life. The repeated units may be the number in the family or group.

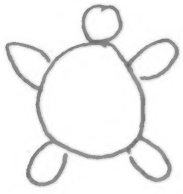
Ki'i Representation (Types) (1:129)

Linear

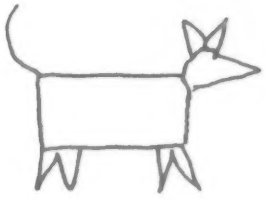
Triangular

Columnar

Human Forms



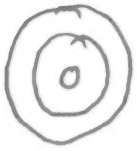
Turtle (honu)



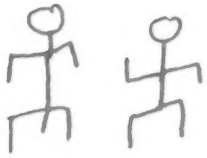
Dog (ʻilio)

Sail

Non-human Forms



Circular



Thought to represent parents and births (children)

Dot and circle forms seem to represent records of trips and tally of individuals.

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PLATES/COVERS

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Pā is the Hawaiian term for platter or plate. Pā poe poe is a circular dish or cover thought to be used for individual servings.

Poi bowl used for storage of taro and sweet potato poi were often provided with low, round covers when not in use. This was used to keep out the flies and to keep the surface of the poi from hardening. The cover was usually any available wooden plate of suitable size. The finer bowls of the chiefs were fitted with a special cover which might be used as a plate. The common plate was round or oval, quite thick, and slightly dished.

Covers were made of the same material as the container to be covered. They were made of either wood or gourd. Covers of wood were first hollowed out. They were then rubbed smooth on both sides with a piece of coral, or with a rough lava rock ('ōahi), then with pumice, or a stone called 'ōio. Charcoal was then used, then bamboo leaf, and lastly, bread fruit leaves and tapa were used to polish.

Shallow plates were also made from the bottom parts of gourds. They resemble gourd bowl covers, but the outward slope of the circular rims have insufficient curve to fit snugly over those of the bowls. However, the gourd bowl covers could have been used for individual helpings of food.

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CALABASH

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Hawaiian term - 'umeke or 'umeke lā'au (bowls made of wood)

Description: Has round circular rims, rounded sides, no handles and no legs.

Uses: Used mainly for poi and vegetable foods. Sometimes a koko, or net was added as a convenient means of holding and carrying.

Though the Hawaiians did not have fire proof cooking utensils, they boiled liquids by dropping hot stones into a calabash containing the liquid and covered it. In this way, they were able to prepare certain foods by steaming. Left-over meat and meat that was imperfectly cooked was sometimes cut up and placed in covered calabashes with hot stones. Hawaiians ate only thoroughly cooked meat. Fish was also steamed in this way.

Woods preferred im making 'umeke la'au:

1. Kou - Probably migrant; easy to cut, soft; seeds edible; woods didn't impart flavor into foods.
2. Milo - with harder grain than the kou.
3. Kamani - Cracked easily when wet and dried in sun; warped easily; heavy to carry when wet.
4. Ulu and Kukui - Likely to dry rot.
5. Hau and Wiliwili - Light and suitable for fishing gear; if canoe overturned containers were able to stay afloat.

Some calabashes were made of specially cultivated gourd.

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PLATTERS

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Meat dishes and platters are called pā, and they have various qualifying names. Pā la'au means wooden; pā kou, made of kou wood; pā loloa, long; pā pua'a, for serving pork; and pā i'a, for serving fish. These dishes and platters may be divided into four types: elongated, circular, raised on runners, and supported by carved human figures. The main distinction between platters and bowls is that the pā are shallow in depth.

The elongated type of platter (pā loloa) has rounded corners and a flat bottom which rests on the ground. Large ones average more that 2 feet in length and in width are slightly more than half the length. Small pā loloa can be identified not so much by the difference in length, as by the narrower width, which is less than half the length. Different platters may have compartments for salt and 'inamona (kukui relish).

Platters on runners are uncommon. They are elliptical in shape, and the hollowed-out runners supporting the bottom lengthwise are carved out the same piece of wood as the platter.

The Bishop Museum has a beautifully carved meat platter that is supported at each end by a carved human figure, one figure facing inward, toward the platter, and the other facing outward. The platter itself is elliptical in shape, has a length of 32 inches, a middle width of 10.75 inches, an inside depth of 3.0 inches, and a rim height of 10 inches. The heads of the figures are bent backward; and their wide, shallow mouths are receptacles for salt, kukui relish, or seaweed relish. **Carved meat platters are rare.**

Buck, Peter H. Arts and Crafts of Hawaii, Volume I. Bernice P. Bishop Museum Special Publication 45, Bishop Museum Press, Reprinted 1964.

PLUMMET SINKERS

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Plummet sinkers (pōhākialoa), another specialized Hawaiian type of sinker, were made to carry lines down to the bottom of deep fishing grounds. Kamakau describes them as being made like poi pounders but with the upper ends narrowed and surmounted by a small knob for the attachment of the line. In addition, the bottom end is globular instead of flat, resembling a large plum reversed, the small end uppermost. Most sinkers were made of basalt, some were made of reef rock.

The large plummets were for use in the deepest fishing grounds, 400 fathoms or so, and particularly for lines carrying 10 or more fishhooks. These deep grounds are termed pōhākialoa by Kamakau, and it is probable that they were so named after the plummet sinkers because the term, meaning long stone, is descriptive of the specialized sinkers.

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PUMP DRILLS

by Naomi Yap
Institute for Hawaiian Studies

The pump drill was known throughout the Pacific. Its primary use was for boring small holes in wood, shell, or bone.

A wooden shaft or spindle was balanced by a circular wheel. A crossbar piece was attached to the top of the shaft by two cords. To revolve the shaft the cords were twisted, and the workman pumped up and down on the crossbar. This motion twisted and untwisted the cords back and forth to rotate the drill. A splinter of rock, human bone, sea urchin spine, or auger cone shell could be used as a drill bit.

There were several uses for the pump drill. When the canoe maker completed the hull and was ready to attach the rim, holes were drilled near the edge of both pieces from stern to prow. Ti-leaf stems were inserted in all the holes. After the pieces had been matched perfectly, a sennit cording was passed through all the holes and the two pieces were lashed together.

When making fish hooks, a pump drill was used to start the curved part of the hook. A hole was drilled in a solid piece of bone or shell to correspond to the inner edge of the bend. Holes were bored from two sides of the shell and met in the middle. In larger hooks, a second hole was drilled from above the first one. The holes were then enlarged, filed, and sanded with coral pieces or sea urchin spines until the exact shape was achieved.

The pump drill was also used as a carving tool to make circular patterns in kapa beaters. It was used to bore holes in tools, ornaments and musical instruments.

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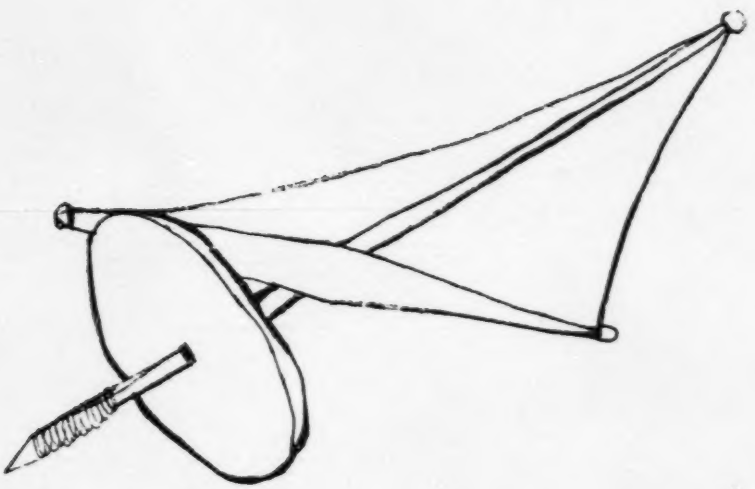


Naomi Yap

Shell Trumpets - Pū

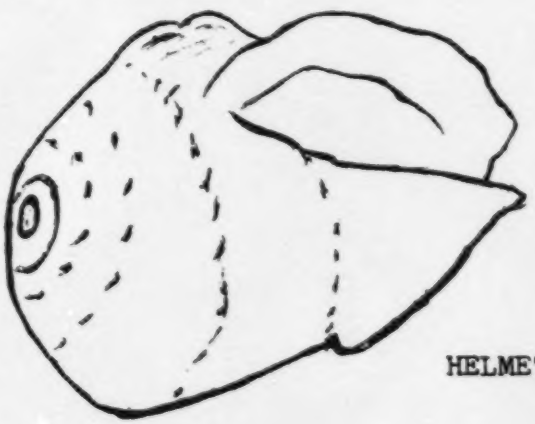
by: Phyllis Anbe
Institute for Hawaiian Studies

The shell trumpets or pū were used to assemble the people and is thus associated with ceremonies. They were made from two kinds of large shells, the conch or triton (Charonia tritonis) or the helmet (Cassis cornuta). Triton shells have long pointed apices which were cut off or a hole bored to form mouth holes averaging 0.5 to 1.2 inches in diameter. The apical whorls of the helmet shell form a flat surface and the mouth hole was drilled in the center. The triton pū are eight to eleven inches long and about four inches wide. Whereas the helmet pū measure six to twelve inches from the mouth hole to the shell aperture with the greatest width across the aperture ranging five to twelve inches.

Pū are capable of emitting a sound loud enough to carry two miles. The secret of producing the volume is in the manner of blowing the pū and not in the individual's breath capacity. The tonal quality varies with the size of the shell used.

Pū were used throughout Polynesia. However, in the Cook Islands, in the Marquesa and in Samoa, the mouth hole was made in the side of triton shells on about the third whorl. The Marquesans attached an uncarved wooden mouthpiece to the side hole with breadfruit gum. The New Zealanders attached a carved wooden mouthpiece.

CONCH or TRITON



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Stone Lamps - Poho Kukui
by: Phyllis Anbe
Institute for Hawaiian Studies

Kukui or kamani oil or sometimes animal fat was used in stone mortars with a wick made of twisted kapa or lauhala. The wick conducted the oil up to its tip near to the rim of the lamp where it burned with a yellow flame. The light was increased by adding more wicks. The kukui nut oil was made by grinding the nut in a mortar with a pestle.

Mortar, in reference to stone lamps, is any hollowed out stone receptacle; many of which were never made for use as mortars. Some may have been used for more than one purpose with the final use as a stone lamp determining its label. The mortars were of various sizes, weights, and shapes with no established single pattern. "With few exceptions, they were made of easily worked vesicular basalt and some were natural pieces of rock of convenient size which were made into lamps by pecking out a circular hollow on the upper surface." (Buck pp.108) Majority of the lamps were four to five inches tall, about four inches across, and ranged between two to five pounds.

The characteristic feature of the lamp is the comparatively small size of the cavity (2.1 to 3.9") and its shallow depth (1.5"). The shape at the rim with a few exceptions is circular. The bottom is rounded. In some lamps a small hole (0.25-0.5") is found at the bottom of the cavity, possibly for the end of a kukui nut candle or the wick of an oil lamp.

The poho kukui took many forms. Some of the cylindrical forms are wider at the upper end, others are wider at the lower end and some have rim and bottom flanges. Others include the hourglass form -- sort of goblet shaped, and others are globular. The commonest form is made from the base ends of broken poi pounders. The poi pounder type is readily distinguisned by its shape and the close grained basalt.

The Bishop Museum has 201 stone lamp receptacles. "Many have definite information as to their use as lamps and many have the inner edge stained black with burnt carbon." (Buck pp. 107)

Cylindrical with wider top.

Cylindrical with wider bottom.

Rim and bottom flanges.

From base of poi pounder.

From shaft of poi pounder.

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TARO (KALO) CULTIVATION
By Leilani W. Oliveira
For Hawaiian Studies

Taro (kalo) was the most important food in Hawai'i and the high islands of Polynesia. More care and labor were devoted to taro cultivation than to any other food plant. Depending on the ground being used, different methods were employed.

On wet lands ('āina wai), along stream banks, mountain slopes and in swamps, the farmer stood in mud up to his calves, planting from early morning to noon. Following his noon meal, he would become involved in other work.

In some places, the mud might be up to his thighs or chest. This was referred to as kuawehi (blackback) planting, since the farmer's back would be burned black by the sun. In such mud depths, 'ilima bushes would be set upright in circles or squares. Each circle or square, would be filled with leaves and grasses. Embankments were raised by digging down three to four feet and heaping up the dirt. The embankment sides would be straightened by stamping with feet and sugar cane tops. Large flat rocks pounded in at the bottom would strengthen the foundation. The sides were then covered with grass and soil to prevent cracking in the sun.

Preparing a new taro field (lo'i) required much work and might take one month or years to complete, depending on the size. A chief might have a hundred or more workers and a large family ('ohana) might work cooperatively, completing the task much sooner.

Heavy work was always done by the men. Men, women and children, "bedecked with greenery" helped with the treading in the field. Treading kept the water from sinking into the soil.

On the day following the treading, selected taro cuttings were planted. Embankments were planted with bananas, sugar cane and ti.

When three or four leaves appeared on the stalks, the farmer gave thanks to his god, collected bundles of the leaves to cook and eat with poi, gave thanks once more, then was sure to share some cooked leaves with his pigs - to signify he had enough for himself and others.

Once the field was growing well, the plants were pressed in firmly, weeding was completed and prayers were offered. It was then tabu for anyone to go into the lo'i or to cultivate it until the taro matured. Only the plants on the bank were cared for.

Taro stalks grew "as big as banana trunks and leaves as big as 'ape." When growth slackened and leaves yellowed, the taro was near maturity, and would soon stand out "like water gourds." The farmer gave thanks once more and prepared a ritual fire, followed by a feast for all who had labored in the new field.

It took from one to two years for taro to mature. Occasionally, it took three or even four years. "Most of the taro today are not even half the size of those of the old days."

On dry lands ('āina malo'o), taro was sometimes planted under ti or 'ama'u ferns, on upland slopes and forest clearings.

The hā'aheo method was often used. The land was well mulched with kūkaepua'a grass and bundles of taro tops were secured. On the morning of planting day, the men rose early and went fishing. Later, while the men cooked and ate the fish, the women strung lei of hala and 'ilima for the men to wear on their heads while planting.

The men took bundles of taro tops and the 'ō'ō (digging stick.) With one hand, the 'ō'ō was thrust into the ground, making a hole. The other hand tossed a taro cutting into the hole.

Cuttings were left until rootlets spread and the plants grew. Then the planting holes were pressed closed and mulched with grass. When four or five leaves appeared on each plant, the whole field was burned. The soil was re-mulched and the taro that then grew "could hide a man among the leaves."

Dry taro cultivation was simple in some places - done in the early morning or evening. The farmer would fish or do some other work the rest of the day.

In other places, it was overwhelming and help was employed to clear the undergrowth, dig holes and mulch the field. Mature taro, fish and pig were exchanged for help.

The engineering ability of Hawaii's early farmers has long been recognized as superior. They "loved the lands where they dwelt" and used their hands, minds and bodies to make the land productive.

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TRAINING FOR WAR AND THE WEAPONS USED

by Lily Kido
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In ancient Hawai'i wars were frequent. Although the high chiefs attained their positions by inheritance, it was necessary to hold them by a superior force of arms against ambitious relatives or invading powers. Others engaged in battles for possession of land or for revenge. Wars also relieved boredom and prevented overpopulation. The conflicts were between the inhabitants of different islands or parts of the same island when they thought themselves powerful enough to invade another territory with success.

Armies were composed of individuals from every rank in society from the chiefs to farmers and fishermen. However, no standing army was kept. The whole adult male population was in time of peace a reserve army, and each man kept his weapons in a convenient place in his house.

Almost all the men were taught to use the various weapons employed in battle, and were frequently engaged in martial exercises or warlike games. Training in group fighting was by staging sham battles when people from surrounding districts were gathered for some festivities. Another exercise consisted of slinging stones at a mark with great force and precision that a small stick 50 feet away would be hit 4 out of 5 times. They also practiced throwing the javelin (ihe), catching and returning those thrown to them, warding the ihe off, as to avoid receiving combats usually in almost every battle. Also practiced were spear-thrusting, pole-vaulting, and boxing.

The Chiefs, from adolescence, received individual training in the use of various arms. Since they had much time to devote to this training, they became the proficient class in fighting.

The warriors used several kinds of weapons in their engagement of war. There were 2 kinds of spears which were made from the kauila wood: the long spear (pololū), which was 9-18 feet long with the spear point flattened to form lateral edges and an enlargement at the butt end, and the short spear (ihe), called the javelin was 6-8 feet long and may have barbed or unbarbed points. The lā'au pālau was a weapon 8-9 feet long and was a combination of a club and spear. Also, there were 5 types of daggers (pāhoa), which were 18-24 inches long and were made of hardwoods as kauila, uhiuhi, or pua: truncheon, bludgeon, long-bladed, curve-bladed, and shark tooth daggers. They were used as accessory weapons to the spear to stab in close fighting. Another weapon was the club (lā'au pālau or newa) which was less than a yard long and had as expanded head and a short handle with a wrist loop. The 3 kinds of short clubs were the smooth-headed clubs, the rough-headed clubs, and the stone-headed clubs. Moreover, there were weapons made with shark teeth attached to handles of kauila, human or dog bone, turtle shell, or olonā fiber. Futhermore, there was a combative instrument for tripping the opponent (pīkoi), which consisted of a wooden or stone weight with or without a handle to which a long cord was attached and thrown at the legs. Another war tool was the sling (ma'a) from which symmetrical and oval shaped sling stones were hurled and flew as close to the ground as possible to be difficult to dodge. It was made of human hair, coconut fiber, or plaited pandanus leaves. Finally, the strangling cord, consisting of a short handle with a cord loop of olonā fiber, was used at times by the public executioner on the kapu breakers, and sacrifice victims.

The chief declared war after consulting his advisors and subchiefs and after the priests at the heiau had pronounced the will of the gods favorable.

Nearly all fighting was done in broad daylight, in open country, and in a very straight-forward manner. War was kapu between the first of June and the end of the year. The place and time of battle and the method of fighting were frequently agreed upon in advance by the opposing parties.

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SEE ALSO: Transparency master for "Examples of Weapons"

HEIAU, A PLACE OF WORSHIP

By Florence P. Afuso
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The Hawaiian religion was a worship of all of the powers of nature. Religion played an important role in everyday life as each phase of life had its god or goddess to whom the people turned for help. This was true of people of all of the social classes - from the ali'i to the kauwa.

The concept of mana or divine power was dynamic in the lives of the people. The dynamics was focused through specific gods, spirits, rites, individuals, or objects. Mana was exhibited as power, skill, prestige, or accomplishment.

Observation of kapu, giving gifts, making sacrifices, saying prayers and chants were some of the ways the Hawaiians used to try to win favor with their gods and become endowed with mana.

The ancient Hawaiians built many places of worship, called heiau. They varied in size from small altars to areas covering acres. Large heiau were made of lava rocks piled into massive walls and laid in terraces for altars and floors. Some heiau on Kaua'i have earth-fill between the sides of the rock walls. Waterworn pebbles were used as flooring and stone-paved or earth platforms were built for the special uses in ceremonies. The entire area was enclosed by walls. Grass houses were often built within the walls for storage or for visiting priests and chiefs. There were no pillars or arched gateways; simplicity was the design of the heiau.

Heiau were made in different shapes: rectangular, square, long, narrow, or round. The most difficult work in the making of a large heiau was in the laying of the stones as thousands were used. The stones were laid and interlocked to reach the highest level of a terraced heiau.

There were 4 or 5 houses in some of the heiau. All were built according to the prescribed rules of the site and of the kind of house, and according to the rule of the god and the ritual services. 'ohi'a wood, pili grass, lama wood and leaves, ki or lehua leaves, were used.

The length and complexity of the rituals varied according to the type of heiau. Public services at large heiau sometimes lasted for several days until the priest or chief was satisfied that the ritual was complete and would bring success.

Each household had a place of worship in honor of their 'aumakua* or family god. It was a very simple enclosure, usually roofless or in some part of the hale mua (men's eating house) which was kapu to the women. It was also a place of worship where a kahuna**or anyone wanting counsel from his 'aumakua would go to spend the night. There were prayers in this hale for the 'aumakua to bless and partake of the food. The men made offerings to the 'aumakua in the name of the whole family.

According to legendary sources, heiau were first built at Waolani in Nu'uanu, O'ahu where Wakēa ma lived.

*'aumakua - singular
'aumākua - plural

** kahuna - singular
kāhuna - plural

There were many kinds of heiau:

A. Luakini or po'okanaka - for the ruling chiefs, with human sacrifices offered. The most sacred house within the enclosure was called the mana. The altar or lele stood between it and the drum house or hale pahu. The location of these kinds of heiau was selected with care. These heiau were only for ali'i nui of an island or district. Other chiefs and commoners could not build them.

The rituals for building this type of heiau were very strict and rigorously enforced. "It was considered unlucky to hear the cry of an 'ō'ō bird when going to the mountains for timber to build the heiau --- If the day was clear and the sky cloudless, then it was a sign that the gods had given permission for the men to get the timber. The high chief, the lesser chiefs, priests, retainers and the keepers of the gods formed a procession to the place where the 'ohi'a trees grew. The underbrush was cleared away, carful not to bruise the bark of the tree --- Then a suckling pig and prayer were offered by the kahuna dedicating the tree --- The kahuna then pinched the pig to make it squeal and with an adz made sacred by its former use, touched the trunk of the tree. With another adz, the tree was cut down --- A pig, coconut and kapa were buried at the stump of the tree. This was done all in silence for no one dared to make a sound. A pig was roasted and eaten and then the fallen tree was cut up into timber for the new heiau. The left-over food was buried with the corpse of a man at the foot of an 'ohi'a tree to compensate for the tree that was cut down.

The procession back to the lowland was one of terror for no one was permitted to pass or to watch it under penalty of death --- Silence was maintained all the while, no fire lighted, no kapa beating heard, no poi pounding. A warning cry went up continuously from the processional till the piece of timber entered the heiau ground."

B. Waihau and unu - agricultural heiau for chiefs. The offerings were pigs, coconuts, and bananas.

C. Ho'ola - healing heiau unique to Polynesia, found only in Hawai'i, showed the advanced state of the knowledge of the culture. Keaīwa Heiau located in Aiea, O'ahu is such a heiau.

D. Ko'a - fishing shrines were usually small. Some consisted of a house enclosed by a wooden fence. Banana offerings were made. Most were exposed to view and were just rounded heaps of stones with a kuahu altar where pigs were baked --- When the offering had been made and the pig eaten, the ko'a was left exposed but the imu with its stones were covered over with dirt and packed down.

Were located close to the beach or in sea coast caves, or on lands with cliffs. Purpose of the heiau was to bring life to the land through an abundance of fish. Ko'a might also increase the 'o'opu fishes in the streams, rivers and fishponds. Those fishing shrines with a stone image for attracting fish were called ku'ula.

E. Pu'uhonua - place of refuge which provided safety within its walls for those who broke kapu which bore the death penalty. Two such heiau have been reconstructed: Kaneāki Heiau in Mākaha Valley, O'ahu and The City of Refuge in Hōnaunau, Hawai'i. Kaneāki, dedicated to the god Kāne, was originally devoted entirely to agricultural offerings but in 1804, King Kamehameha I expanded the heiau from an agricultural to a sacrificial heiau in preparation for his invasion of Kaua'i. This heiau is situated at the mouth of Mākaha Valley and faces the sea. Women were not permitted in the heiau, only high chiefs and the priests.

At The City of Refuge, one can see the images that guard the walls. The heiau is enclosed by massive stone walls and also faces the sea.

The four major gods worshipped were:

A. KĀNE, the procreator and provider of sunlight and fresh water and life.
B. KŪ, god of government and war and the only one demanding human sacrifices. His heiau were the most elaborate.
C. LONO, god of peace, agriculture and rain. Offerings were products of the farms. The makahiki celebration held once a year honored Lono.
D. KANALOA, lord of the ocean and ocean winds, together with Kāne, opened fresh water springs.

'AUMĀKUA, ancestor gods; god spirits of those who were in life forebearers of those now living; spiritual ancestors.

Today the most peaceful co-existence of 'aumākua and akua with the Christian god seems to be in prayers. Hawaiian and Christian prayers are sometimes said on the same occasion without any apparent conflict.

"It seems important that these are family gods with names. They seem a somewhat mystical and externalized form of deeply ingrained family traditions, family mores, standards, and values."

'Aumākua remained members of the family or 'ohana. One spoke to an 'aumakua through ritual and reverence. "For the early Hawaiians, the 'aumakua as an invisible force or in tangible form were ever present permeating thought and action. The kapu against hitting anyone on the head or face was inter-twined with the belief that good spirits entered the body by the head. The many kāhuna of the healing arts prayed to their 'aumākua for diagnostic insight. The child was taught which specific 'aumakua to call for help."

'AUMĀKUA also brought warnings of coming misfortunes and deliverance from immediate anger. Illness was often thought to be punishment from offended 'aumākua. Breaking food kapu and violating the kapu of the menstrual period, for example, could bring punishment. One of the 'aumākua functions was to give mental and physical strength when needed. To do this, the 'aumakua entered into or possessed a body in varying degrees and lengths of time.

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Hawaiian Culture Teacher Information Materials and Data Cards

by

Haroldeen Wakida

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3. Words underlined with ***** are subheadings.

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KĀHUNA

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INDEX TO FOUR HAWAIIAN CULTURE INFORMATION BOOKS FOR STUDENTS

- Curtis, Caroline. LIFE IN OLD HAWAII. Honolulu, The Kamehameha School Press, 1970.

- Hazama, Dorothy. THE ANCIENT HAWAIIANS: WHO WERE THEY? HOW DID THEY LIVE? Honolulu, Hogarth Press, 1974.

- Pratt, Helen Gay. THE HAWAIIANS, AN ISLAND PEOPLE. Rutland, Vermont, Charles E. Tuttle Co., 1963.

- Titcomb, Margaret. THE ANCIENT HAWAIIANS: HOW THEY CLOTHED THEMSELVES. Honolulu, Hogarth Press, 1974.

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III List of Illustrations in Curtis, Hazama & Titcomb Books
IV Index to 4 books

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I. PREFACE

This is an attempt to index four informational books on Hawaiian Culture which are generally considered readable and understandable for students of fourth grade reading level. These books are usually available in Hawaiian Culture Studies classrooms and in school libraries.

In developing data card materials we tried to provide information that is not readily available in these books. Therefore, the materials in these books and in the data cards should complement each other.

We realize that this is not a comprehensive list of topics. We also had to limit the number of references in order to accomplish the indexing. Space is provided so that the user may add other books based on the needs of the students.

The format was planned so that teachers may cut up each topic and add it to the Data Card Box. Accurate illustrations are important data material for students. Therefore, a list of the illustrations are also provided in this index except for Pratt which already has a list.

We hope that this index will be helpful to users and one to which additions will be made continuously.

Myrna Nishihara
Dorothy Hazama

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